Lecture
ON
THE CONCENTRATION OF POPULATION IN CITIES.

Delivered at University College, London, on Feb. 24th, 1892.

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(Concluded from p. 1068.)

IT needs to be pointed out that the overcrowding of our cities, which is admittedly the greatest of all sanitary evils, is the direct result of sanitary legislation. When, some forty years since, it was recognised that water-carried sewage inevitably poisoned the wells, no attempt was made to protect the wells from pollution; but the surface wells were compulsorily closed, the inhabitants were sold in bondage to the water companies, and the houses were compelled to pollute our rivers. These measures have given a fatal facility for overcrowding, and wherever a line of sewers is taken the speculative builder follows; for, not being hampered by questions of water-supply or filth disposal (the sanitary authorities relieving him of all responsibilities in this matter), he is able to erect buildings without any curtilage, and of any height almost that he chooses. Be it observed that this state of things is not limited to London or the big towns. The notion that houses are as well without curtilage as with it has infected the country, as anybody may see for himself when travelling by railway. The train runs through miles of country, with scarcely a house to be seen; but when we stop at the developing district, growing up round the country station, we find the houses packed almost as closely as they are in the centres of towns. I have in my mind a village where land can be bought at very little above its agricultural value. This village has been selected by a railway company for the establishment of "works," and the company is erecting rows and rows of artisans' cottages with at most a few square feet of curtilage each. The onus of draining these cottages will ultimately be thrown on the local authority, with the additional onus, in a few years' time, of providing the inhabitants with allotments; and all the expense of this will fall upon the ratepayers as a whole. Clearly, the best place for an allotment is round the dwelling, and some compulsion should have been put upon this wealthy company to provide them. A couple of hundred acres of land (enough for 1000 cottages) might, I suspect, have been purchased in this particular spot for less than £10,000, and would have added £10 to the cost of each cottage. What is this to a rich company, especially if it be the means of increasing the health and contentment of their workpeople? Would it not be money well spent, and spent to the ultimate advantage of the shareholders? We have engendered a stingy habit of mind towards the question of space round houses, which almost amounts to a national insanity.

A country town which I know well, where 200 acres of land with a house and farm buildings, recently sold for £4000, has sanctioned the erection by a building society of 200 dwellings on six acres of land. This building estate will, if successful, have a population of 1000 persons, or nearly 170 to the acre, a degree of overcrowding about three times as great as that of the average of London. The building society will make a good profit, while the sanitary authority which sanctioned this scheme will ultimately have to deal with the infectious diseases of this crowded area, and will not only have to provide, at the expense of the ratepayers as a whole, for the safe bestowal of the filth from this area, but will also, possibly, be compelled to provide the tenants with allotments.

Can anything be worse from the hygienic point of view than the modern tenement house or monster hotel, where each floor ventilates into the floor above and the floor below, while the "lifts" effectually drive the air from one floor to another without renewing it? In such places, where hundreds live under a common roof, fresh air is impossible. Dr. Ogle, in his paper on "The Relation of Occupation to Disease and Mortality," read at the late Congress, pointed out that the mortality of hotel servants was higher than that of any other class, being nearly four times as great as that of the clergy, who enjoy the lowest degree of mortality. This high mortality is not to be wondered at, for the hotel servant never breathes fresh air, and lives day and night in an overcrowded dwelling redolent of humanity, dinners, gas, tobacco, and drains, one or all, most commonly all. Alcoholism may have something to do with this high mortality, but we must all admit that the unwholesome conditions of life are probably the main cause of the alcoholism. Drinking is said to be on the increase in this country, and I strongly suspect that it would be found to bear a very definite ratio to the overcrowding on space. The advantages of hotel life are many, and the charms of living in a pleasant community are very great. These charms have always been recognised, but when we contrast the "college," as seen at Oxford or Cambridge, with its ample area and the opportunities for society or seclusion at will, with the modern hotel, raised tier above tier, in which tranquillity and fresh air are alike unknown, it must be confessed that, æsthetically and hygienically, the mediæval architect was ahead of his successors. I have not in my mind merely those great hostelries in cities, where persons are content to jostle each other during a short paroxysm of business or pleasure; but I am thinking rather of establishments erected in health resorts and by the seaside, which have been designed for the reception of delicate persons and invalids, and which are well calculated, in my humble judgment, to bring chronic maladies to a termination.

Let us look at the question of overcrowding on space from an economic point of view. It is calculated that to raise the body vertically requires twenty times the force necessary for walking on the level, so that whether we mount stairs to the height of 100 feet or walk 2000 feet along the level the labour is the same. But I shall be told there are "lifts," and, that being the case, it becomes quicker and easier to move vertically than horizontally. It costs money to be carried, however, and a "lift" is a most extravagant machine, because it does not accommodate the force expended to the weight to be raised. In a report recently issued by the South London Electric Railway, I find it stated that the cost of working the lifts is 10 per cent. of the gross receipts! We are becoming alive to the fact that the fogs of London are getting more frequent and more virulent, in spite of the steady increase in the use of gas as a fuel. This is due to the overcrowding of houses and the multiplication of chimneys on a given area. In the country, and in most towns, the smoke is diluted to a point which practically gives us no trouble. It need hardly be said that a house of nine storeys will give off three times as much smoke as one of three storeys having the same area. In the centre of London we have been building enormous piles of offices and tenements, adding storeys to old houses, and putting buildings upon every garden and back yard, while at the same time the area of the city has enormously increased. What right have we to grumble at the increased density of the fogs? We have deliberately caused it, and neither Royal Commission, parliamentary committee, nor anthracite coal will put it right. Even though we got rid of the "blacks," we should still have the irritating invisible products of combustion—by far the most harmful of the elements of a fog—to deal with. We have made our bed, and we must lie upon it. The damage done to property by fogs, the extra cost of washing and painting entailed by living in the dirtiest capital city in the world, the serious loss of trade, the cost of using artificial light in the daytime, as well as the injury to health, must be all reckoned as among the penalties we pay for overcrowding. "Cleanliness is next to godliness," says the old adage, and we are bound to admit that the filthiness of the air of London is a not unimportant factor in causing the moral degradation in which not a few of the inhabitants are sunk.

One main object of overcrowding houses is the saving of time in the transaction of business, but there are limits which cannot be overstepped without defeating our object. The check put upon freedom of locomotion by overcrowding, and the time occupied in going from point to point, more than counterbalances the shortness of the distance which we have to travel, to say nothing of the fact, previously alluded to, that vertical movement requires twenty times the force of horizontal movement. In London rapid locomotion is getting daily more and more impossible, and there are so many vehicles and persons in the streets that

we are all in the way of each other. Our streets are always more or less blocked by building operations, which must be in proportion to the cubic contents of the buildings on a given area. Then, again, we have beneath our streets sewer pipes, water pipes, gas pipes, hydraulic power pipes, and pneumatic tubes, as well as wires for telegraphs, telephones, and electric lights. The necessity for interfering with these various subterranean arrangements in any one street must be largely proportionate to the number of dwellers whose front doors open into the street. These being almost unlimited, it follows that our streets instead of being only occasionally "up," as the phrase goes, are only occasionally "down." Again, the number of vehicles which stop at any given door is proportionate to the number of persons who live behind it. A set of "mansions" with 200 inhabitants may have scarcely more frontage than a modest house accommodating ten persons, but the vehicles stopping at them will be twenty times as many. It is the halting vehicles rather than the moving ones which offer the greatest obstacles to traffic. In civilised London we have very few back doors; our coals are shovelled in and our garbage hauled out under the dining-room windows; and these tedious operations, performed in the main thoroughfare, are in themselves great obstacles to traffic. The wear and tear of the streets is in proportion to the traffic, and in some of the leading thoroughfares the traffic has become so great that it is wonderful that any material can be found hard enough to stand it. These considerations make it clear, I think, that the increasing difficulties of locomotion in London are due to the overcrowding of houses on a given area.

From the æsthetic point of view the effects of overcrowding are disastrous. Proportion is one of the most important elements in architectural beauty, and few will be found to admire the Gargantuan architecture of the engineer-builder.

In spite of a somewhat dull uniformity, Regent-street still remains the finest street in London in virtue of its outline and proportions and the possibility of sunlight getting access to it. Contrast Regent street with Northumberland-avenue, that drafty gloomy gorge of bricks and masonry in which the only really pretty building is the cabman's shelter at the end. It is mere waste to erect fine buildings in situations where they cannot be seen without effort. Every good building ought to have a proper "setting." How would Westminster Abbey look without its setting of greenery and turf? Can any building look really well without some verdure or floral decoration? Can any building that has them look really ill? In London our buildings are getting too high for their confined situations; they block out the sunlight, their many chimneys foul the air with soot, and, as a consequence, our palaces are grimy, and gardening, the most beautiful and the most health-giving of all arts, has become impossible. Wandering in the streets of London, and looking at the dim outline of our grimy public buildings looming through the mist, one is reminded of the lines from the opening of "Macbeth:"—

> Fair is foul, and foul is fair:
> Hover through the fog and filthy air.

When the air of a city gets so foul as to hinder and arrest vegetation, we are hygienically in a "parlous" state, as Touchstone would have said. Not only do the green leaves of plants absorb carbonic acid from, and give off oxygen to, the air, but their roots are no less useful in draining and purifying the soil upon which we live. We have heard a good deal about the dangers of an impure soil, and the advice with regard to it is invariably to put something which is impermeable, such as concrete or asphalte, to prevent the rising of possible impurities from the earth. This is analogous to putting dead bodies into impermeable coffins, whereby the danger of their decomposition is not prevented, but merely delayed. The only way to purify the soil is by cultivation, aeration, and the growth of plants. I believe that an evergreen creeper, such as ivy, does more to keep the foundations and walls of a house dry and pure than do any of the patent impermeable applications.

As London, in spite of all its "betterments," is getting steadily less habitable year by year, there is a growing tendency to sleep out of town and journey to and fro to business. Not more than 37,000 people sleep in that square mile which we call "the City"; but as more than 300,000 find permanent daily occupation there, it is obvious that there are some 260,000 daily workers who have to be transported to and from the suburbs. If we reckon cost and loss of time in transit, it will not be an extravagant estimate to suppose that this journeying involves a loss of one shilling per head per diem, or, collectively, £13,000 a day, £78,000 a week, and over £4,000,000 per annum. When a man lives out of town he becomes a slave to a railway company, he has to be punctual himself in order not to miss trains which are seldom punctual, and he finds out what it is to bear "the whips and scorns of time." As he wastes his time in being shuttled to and fro he must be queerly constituted if he does not wish for the good old times when it was possible to "live over the shop." Our modern facilities of communication cause us to be always in a hurry, and it is certainly a suggestive fact that having invested nearly £1,000,000,000 in railways, on which we go shrieking to and fro; having so perfected the penny post that it has become a veritable nuisance with its endless delivery of documents, which are mainly worthless waste paper in the form of advertisements; having annihilated time and space by the telegraph and telephone; and having abolished darkness by means of gas and electricity—there should arise an ominous cry for a limitation of the hours of labour and a demand to do by Act of Parliament that which, "in the good old days," the sun did for us.

There is yet another consideration which shows the cost of overcrowding houses. When growth occurs in an organised body, such as a tree or an animal, all parts increase *pari passu*, and there is no necessary loss of health or vigour. But in a city growth is more like an inflammatory swelling, the cells of the part increase, while there is no adequate increase of the channels which bring nutriment. Stasis is apt to occur, and unless relief be given by surgical means the death of the part will follow. The modern city is ever in need of surgical interference; new thoroughfares have to be cut in order to give relief to congested districts, and these operations can only be carried out by means of an expenditure of money which is simply appalling in amount. The attempt to improve the sanitary state of a city by a process of "Haussmannising" must be futile. If we make a fine boulevard through the slums the inhabitants are merely piled in heaps on either side; the width of the street is increased by increasing the overcrowding of inhabitants under a common roof, which is the greatest of all sanitary evils. Not long since I read a scheme (I think by Mr. Shaw Lefevre) for turning the Euston-road into a boulevard by appropriating all the front gardens and back yards, and erecting huge tenement houses on either side. No proposition could be worse from a sanitary point of view. It cannot be too earnestly insisted upon that the air of the grimiest back yard is better than that of any room, even though its (generally closed) windows command a view of a stately boulevard. The breathing of fresh air, so important to all, is doubly important to very young children. Children under four are too young to play in the streets; their mother's home duties are too arduous to allow her to take them to the park, and the little girl who might do so has been driven to school by the law. The result is that the little children have to breathe the fetid air of a small living room from week's end to week's end, instead of being able to play in a little yard, where the mother could watch them through the open door, as formerly was the case. The value of an open space is largely in proportion to its proximity to the dwelling. A little back yard or garden of one's own is worth infinitely more than Hyde Park a mile off, and the old graveyard converted into a garden a hundred yards down the street is far more precious to the poor town dweller than Epping Forest or Burnham Beeches.

This mention of disused graveyards leads me to say a few words on the disposal of the dead. Cremation is just now being strongly advocated, but, as I believe, on insufficient grounds, and for the following reasons:—1. Rational earth burial has never been shown to be productive of any evil, and the facts of bacteriology point to the conclusion that it is not a source of danger to the living. Even the scandalously irrational burial which has been permitted in the past has caused very little definite mischief, not even in those cases where the act of consecration has not been able to keep off the dangerous invasion of the graveyard by the railway contractor. 2. Cremation is wasteful, and involves a needless expenditure of fuel, and would help to still further pollute the air of our cities by products of combustion, always poisonous to breathe, and not always odourless. Dead bodies should be left to nitrify in the earth and provide nourishment for trees which, while affording us timber and firewood, would at the same time effectually cleanse the soil of its impurities and render it fit to be used for burial

a second time. The advocates of cremation say that this economic argument is false because the products of combustion are indestructible, and must ultimately go to nourish plants somewhere and somehow. This is doubtless true, and by parity of reasoning we might do well to throw our money into the street instead of paying it into the bank, and we might advocate the fertilising of the market gardens round London by setting fire to the manure in the London mews. 3. The necessity for burying the dead which hitherto has existed has had the indirect effect of separating the living and preventing to some extent the overcrowding of houses. If our cemeteries are to be replaced by furnaces with tall chimneys pouring noxious gases into the air, and if the ground which would be occupied by cemeteries is to be covered by houses, it is clear that we shall gain nothing from a sanitary point by the introduction of cremation. 4. Although I am a professor of medical jurisprudence, I think the objection that cremation will enable the poisoner to escape detection is a minor objection, though real.

The overcrowding of houses means loss of liberty, for the closer we crowd together the more likely we are to suffer from the sanitary negligence of others, and the more necessary does it become to regulate our actions by by-laws and Acts of Parliament. I need hardly insist on the fact, so ably enforced by Herbert Spencer, that personal liberty is necessary for social evolution, and that Acts of Parliament are evils only to be tolerated for the avoidance of greater evils. The growth of Acts of Parliament of late years, and the new offences which they constitute, was recently forcibly pointed out by the chief constable of Liverpool in a letter to *The Times*, in which he stated that in 1890 there were as many as 11,279 cases in Liverpool under the Education and Health Acts alone. Overcrowding has necessitated the compulsory notification of disease and the appointment of a crowd of inspectors, and there are those who wish to compel us to take out a licence for our houses, which is only to be given when they are fitted with the particular sanitary apparatus which happen to be in fashion. It is well to bear in mind that the overcrowding of which I am complaining is largely the result of compulsory Acts of Parliament which curtailed our liberty in the matter of water-supply and sewerage, while they gave to the speculative builder opportunities by which he has not failed to profit. When a couple of years since the influenza made its reappearance among us a distinguished engineer wrote to the papers with the kindly object of comforting us by the assurance that the perfection of our sanitation would certainly lessen the ravages of the epidemic. I need hardly say that my opinion was directly opposed to his, for influenza being an air-borne disease, and the overcrowding of houses and the fashion of many families living under a common roof having largely developed since its last appearance, it seemed probable that the epidemic would be more severe than formerly, and more difficult to eradicate.

Can nothing be done to check the overcrowding of houses and persons? Although we have passed many laws for the improvement of the public health, we have not sought as yet to put any very severe restraints on the builder and landowner, and we have not sought, as would seem but reasonable, to limit the number of inhabitants who may be accommodated on a given area of land. It is the object of all traders, whether they be public companies or individuals, to have the largest number of customers on the smallest possible area, and therefore any attempt at restriction cannot be popular. Neither would such restriction be popular with the sanitary authorities, who have to collect rates; for rateable value is unfortunately directly proportionate to the overcrowding of houses on a given area. We have borrowed large sums of money, and the rates have more than kept pace with our sanitary progress (the rates of my own house have risen more than 30 per cent. in the last twenty years), and as houses pay rates the authorities encourage building by every means in their power; they foster overcrowding and perhaps call it "betterment." Sanitary authorities are now being encouraged to embark in business as purveyors of water, gas, electricity, and locomotion; and as their success in business will depend upon the number of customers they can crowd into their respective areas, they are likely to be more biased than ever in favour of overcrowding.

One of the functions of a sanitary authority is to protect the public from the rapacity of public companies; and one would fear that the desire to make money out of the needs of the inhabitants must hamper the judgment and impartiality of the authority. This fashion of sanitary authorities to become purveyors must be regarded as an interesting socialistic experiment, but not one which is likely to conduce to the public health or public convenience. We have many sanitary laws, and the present does not seem the time to advocate a return to the liberty of the past. Unless the sanitary condition of our towns is to get steadily worse, we must have a law to prevent overcrowding. Such a law seems to me to be the necessary complement of all the others. We ought, I believe, to insist that every building shall have a minimum curtilage in proportion to its cubic contents, and it is evident that any such rule, to be of value, must be of universal application throughout the country. Such a rule, I shall be told, is impossible because of the high price of building land in cities. To this objection my answer is that the exorbitant price of building land is the result of the absence of any such rule, for the value of building land is, *cæteris paribus*, proportionate to the number of inhabitants it will accommodate; and if the accommodation of a given area is to be unlimited, the price of land will be almost unlimited also. It is evident that any rule for making the minimum curtilage proportionate to the cubic contents must not be too exacting, and must be very simple and capable of universal application. Suppose we were to say that the curtilage of a building shall in no case be less than an area expressed by a figure representing 1 per cent. of the cubic contents of the building. This is certainly a very modest demand. Let us see how it would work. By such a rule as this a building like the Masonic Hall at Chicago, which is 114ft. × 117ft. × 265ft., and which (to take round numbers for simplicity) contains about 3,500,000 cubic feet, would require 35,000 square feet of curtilage, and since the area of the building itself is 13,000 square feet, the size of the entire plot of ground which it would require would be 48,000 square feet, or about an acre and one-eighth. Assuming that this building can accommodate 1000 persons (probably a low estimate), it is evident that, even with the compulsory curtilage which I suggest, we should still have a condition of overcrowding; on space which must be regarded as indefensible.

The average London dwelling house, which has about twenty feet frontage with a height of sixty feet and a depth of fifty feet, contains 60,000 cubic feet, and ought, according to the rule I have suggested, to have a minimum curtilage of 600 feet—i.e., a back yard as wide as the house, and thirty feet long. Such a house would accommodate about ten persons, and would occupy 1600 square feet of ground, or, with its necessary proportion of street, 2200 square feet, or, as near as may be, the twentieth of an acre. Even under these circumstances we should have 200 inhabitants to the acre, which is a number certainly largely in excess of what ought to be allowed. It is evident that unless we know the maximum number of inhabitants which is to be permitted on a given area, it is impossible to make any reliable calculations as to water-supply and sewage disposal. It does not seem to me more unreasonable to set a limit to overcrowding houses on a given area than it is to require a definite cubic space for the inhabitants of common lodging houses. This rule could not, of course, be applied to existing houses, but the cubic contents of such houses or of houses built to replace them ought not to be suffered to be increased unless this rule or something like it be observed. If we allow the cubic contents of buildings to be indefinitely increased regardless of the question of curtilage, as is being done in every part of London, it is certain that the condition of public health must steadily deteriorate. To imagine otherwise would be to give the lie to those elementary facts of physiology and hygiene which are universally admitted. To purchase plots of vacant ground at exorbitant rates, and miscall them "lungs," is no true remedy for overcrowding. The only true remedy is to have the open ground dovetailing with the houses. Let us also remember that overcrowding in the daytime is no less harmful than overcrowding at night. The citizens of London have seldom had an eye to anything except immediate profit. They allowed Moorfields and the Drapers' garden to be sold for enormous sums, without a thought for the health of the thousands of young men and women who daily toil in this overcrowded spot; and they have taken no heed of the Registrar-General's returns, which are telling them that the death-rate at the prime of life (i.e., between the ages

of thirty-five and sixty-five), which has been steadily rising for the whole kingdom, is nearly 70 per cent. higher in London than it is in the best country districts. No regulation other than the insistance upon a proportion being observed between cubic contents and curtilage would serve to check overcrowding. An arbitrary rule to limit the height of buildings is not sufficient, because if the builder be not allowed to soar he will commence to burrow as he is doing in Chicago, and as he has done for many years past in London. A crying need in London is for back doors and back streets between the houses for delivering goods, and beneath which could be laid the various subterranean pipes and wires, the repairing of which is so frequent a cause of blocking the main thoroughfares. A system of back streets would do more to facilitate the traffic of the thoroughfares than a similar addition made to the width of the main streets.

I am told that the views I have been laying before you are impracticable because overcrowding is necessary for business, and it is asserted by some that the commercial prosperity of this country and America is largely due to the fact that the business men are content to literally crawl over each other in an ecstasy of frenzied competition which is making existence a burden. I feel convinced, however, that this question of overcrowding on space is one which must be dealt with in the future in no niggardly spirit, and that our national and commercial prosperity very largely depend on our willingness and ability to face it. The inadequate housing of the working classes has, I believe, more to do with their chronic discontent than is generally supposed. A real "home," be it remembered, is a very different thing from a room in a barrack. A home that is clean and bright and beautiful, the beauties of which have increased year by year under the owner's fostering care, where the children have space to grow up healthily, and where there is some escape from the dirt and din of the workshop—a home in which it is possible to take a pride, and which is a source of daily pleasure—is something which a man will weigh carefully in the balance before he lightly determines on throwing up his employment. A decent home without sufficient space is impossible, and the sooner that great industrial companies and employers of labour grasp this idea the better. That the labouring classes are beginning to grasp it is shown by the recent agitation in the East-end of London against replacing the two-storeyed houses by industrial barracks. The fashion of piling people in heaps, and offering them libraries and bagatelle tables as a compensation must come to an end, and I look forward hopefully to the working of the Allotment Act, especially when it is recognised that the proper place for the allotment is round the house. Thirty perches (rather less than a fifth of an acre) is the maximum amount of garden which a man can cultivate at his leisure, and it is the little bit of garden which converts a dwelling into a home, which provides a delightful occupation for a man's leisure hours, which freshens the air round the dwelling, which keeps a man from the tavern and the sixpenny betting hell, and which is capable of turning all the refuse of the house into profitable garden produce. Not much improvement is to be looked for until the conscience of the educated and upper classes has been roused. As long as persons in high position are content to leave their broad acres and swelter for the season in highly decorated "bijou residences," where the servants are poked away underground or in miserable attics, not much improvement can be expected. Many of the persons who come to London for the season are philanthropists whose hearts "bleed" for the miseries of the East-end. These people forget that when they come to town they make it necessary for humbler people who minister to their wants to come to London also; and that, if they who are wealthy are content to live on a very insufficient area, their poor dependents must necessarily be packed together in great discomfort and at the cost of their physical and moral wellbeing. Let those who are sorry for the state of overcrowding in cities stop out of them, and spend their incomes in the country. If they can succeed in making those who live round them in the country happy and contented, and thus check the rush for the towns, they will do infinitely more good than by subscribing to city missions or "People's Palaces." Unless we can succeed in checking the overcrowding of cities by some such regulation as that which I have suggested, I believe that all the money we have spent and are spending on so-called sanitary improvements to be money thrown away, and that, in so far as modern hygienic methods have enables people to live closer packed than heretofore, I believe they have worked mischief rather than good. Those who have the control of developing districts will do well to keep them as rural as possible, and encourage private gardens by every means in their power. The house ought to be taxed in proportion to its size, and not the garden round it; for a garden is a great boon in a town, even to those who do not own it, because it serves to keep the dwelling-houses asunder. A person who owns a garden may, if he be so minded, be quite independent of the sanitary authority; and a wise sanitary authority will do well, by a remission of taxation, to encourage him by every means in its power. So long as sanitary authorities are content merely to encourage the jerry builder by clearing up his messes and making good his deficiences, not much improvement is to be expected. Such policy may be "good for trade," but it is not good for the public health.

Finally, one hopes that it may be increasingly possible for a man to own his dwelling and the ground around it, and that the transfer of land may be much facilitated. I am not going to embark on a discussion as to the relative advantages of large and small holdings; but I would merely remark that it is certain that no one is so likely to do justice to the land and to improve it as the absolute owner, whether he own a thousand acres or only one. If a man owns a bit of land, be it farm or garden, he is bound in self-defence to make the best of it, and he can have no object in quarrelling with, cheating, or shooting his landlord. This last is a point which political economists not unfrequently neglect. We are often told that large holdings are more economical than small ones, and it is pointed out that on the farms of our large proprietors the yield per acre is greater than the yield on the land of the peasant proprietors of France or elsewhere. Our big farmers, however, have not of late years grown rich, and I do not think that free trade is the sole cause of this. Is it not possible to farm too high for profit? We may drive a steamship ten knots an hour at a profit, but lose by attempting to get fifteen knots out of her. So I fancy that much of the profit of farming is frittered away in a lavish expenditure on artificial fertilisers, in the desire to get excessive crops. Small holdings and gardens and what I have called the dovetailing of the houses and the land have two advantages which are often lost sight of. The first is that the producer and consumer are largely identical, so that the middleman and free trade are alike powerless to do him harm. The second is that all the refuse of the house is available for the land, and in proportion to its amount is the expense of buying "artificials" and the risk of keeping stock done away with. The key to good agriculture is thrift, and no arrangement more thrifty than that which I have indicated can be conceived. The key to good sanitation is agriculture, and therefore no effort should be spared to maintain a rural element even in our great industrial centres.

A Clinical Lecture

ON

THE TREATMENT OF SPINAL AND OTHER TUBERCULAR ABSCESSES.

Delivered at the London Hospital,

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SURGEON TO THE HOSPITAL.

GENTLEMEN,—Among the advances which may be claimed for surgery in recent years must be placed an improved treatment of abscess, and especially of that chronic form of abscess which depends upon tubercular disease. For a considerable period the whole art and science of the treatment of suppurating cavities was embraced by the advice, "*Ubi pus, ibi evacua.*" Into the abscess a very tardy and very small incision was made. The position of the cut was unimportant. If carried out with a dirty lancet it mattered little. Following upon the operation came a squalid and unwholesome period of poultices and foul dressings, and after that, as a rule, hectic and the burrowing of pus. The

subjects of large abscess who escaped death in those days had not to thank the surgery of the time. The introduction of the principles of drainage and the teaching of antiseptic surgery brought about a revolution in the treatment of the abscess. The incision made was free, and was so placed as to allow of the readiest escape of the matter. Every step was taken to keep the abscess cavity not only empty, but also surgically clean. The treatment involved considerable trouble, but it was attended by excellent results. In dealing with minor abscesses—especially in children—little fault can be found with this method even at the present time. In order to ensure the most complete and ready evacuation of the pus in psoas abscess I urged—in a paper read before the Royal Medical and Chirurgical Society on Jan. 8th, 1884—that such abscesses should be opened from the loin. I described the steps of an operation whereby the psoas muscle could be safely reached through an incision at the outer margin of the erector spinæ. The wound thus made opened the abscess at its most dependent point, and evacuated the pus by the most direct route. It enabled the surgeon also to examine the vertebræ in the lumbar region, and in children and slender adults such an examination is readily carried out. In the first case recorded I removed from the spine a large sequestrum involving the greater part of the body of the first lumbar vertebra. The patient was a woman aged twenty-one, in Mary ward. Since then there have been many cases in my wards in which the simple draining and frequent irrigation of a psoas abscess have been followed by cure, but I would have you note that in these successful cases the patients were young children.

The lumbar incision is not possible when such deformity exists as brings the ribs close to the iliac crest, nor is it easy in the person of a very tall and fleshy adult. The invention of the sharp spoon and the method of removing chronic inflammatory deposits by scraping introduced a new element into the treatment of tubercular abscesses. Mr. Barker and Mr. Bilton Pollard have reported cases of excision of the hipin which the inflammatory tissue was removed by scraping and flushing with hot water, and in which primary healing followed without the intervention of a drainage-tube.[1] These cases are very striking and remarkable, and afford a strange contrast to the results obtained in the past.

It is difficult to trace the origin of the method of treating tubercular abscesses by incision and scraping, followed by closure of the wound without drainage, but the procedure is very conspicuously associated with the name of M. Trélat, who carried out a large number of these operations, for the most part in small abscesses, in 1887.[2] Side by side with this plan of dealing with the chronic abscess comes the method by repeated aspiration, followed by the injection of a solution of iodoform. This procedure would appear to have been originated by Verneuil, and has been very extensively employed. Numerous examples of cure by this method have been reported. Such examples disarm criticism, but on theoretical grounds it is impossible not to urge certain objections against the procedure. In the abscesses we are now dealing with there is a considerable quantity of semi-solid matter which cannot be removed by the aspirator. This and the abscess "sac" are left behind, and would appear to provide the very material necessary for the foundation at a later period of a "residual abscess." In dealing with all tubercular affections a very free removal would appear to be of primary importance.

The operation.—I might now describe the particular method of treatment by scraping I have myself adopted, and will illustrate it by a series of examples. Certain of these cases you have seen for yourselves in the wards during the last few months. An incision is made into the abscess at the most convenient spot, and, whenever possible, at the most dependent point. It should be so placed as to command all parts of the abscess, and to allow of access to its remotest quarters. It must be made through perfectly sound skin. The pus is allowed to escape, and the abscess cavity is then washed out with a hot solution of corrosive sublimate of the strength of 1 in 5000. For this purpose a Leiter's irrigator of the largest size, and suspended at a height of twelve feet, is convenient. Many gallons of the solution are required. When the fluid returns clear the fingers are introduced into the cavity, and the caseous semi-solid matter which exists in such quantity in these abscesses, and which is not wholly removed by flushing, can be dislodged. By means of the fingers also septa in the cavity may be broken down, diverticula may be opened up, and by the aid of the finger nails a considerable quantity of the smooth slimy lining membrane of the abscess may be removed. Repeatedly the cavity is flushed out with the warm solution. The lining wall of the abscess is now carefully and thoroughly scraped with a Volkmann's spoon until the whole surface has been laid bare. Now and again the process is interrupted to allow of the cavity being once more flushed out so as to remove such débris as may have collected. The simple Volkmann's spoon has appeared to me to be a more convenient instrument than the ingenious flushing gouge invented by Mr. Barker and used by him with such pronounced success. The sharp spoon is more readily manipulated and is more completely under control, and in dealing with thin-walled abscesses within the abdomen this matter must be regarded as of vital importance. The rushing of water during the process of scraping with the gouge is a little confusing, and is apt to interfere with the precision of one's movements. In dealing with tubercular joints, Mr. Barker's instrument leaves little to be desired. After the scraping and flushing have been persevered with until all the lining membrane appears to have been removed there comes what I believe to be the most important part of the operation—the rubbing of the abscess wall with sponges, and the thorough drying of the cavity. I use small hard Turkey sponges in holders. The holders are shaped like slender pressure forceps of the largest kind, and are about a foot in length. By means of the sponges the whole of the abscess wall is vigorously rubbed, and it is surprising what a quantity of inflammatory material in the form of the slimy lining membrane, and even cheesy pus, comes away upon these sponges. It is at once made evident that much that it is necessary to detach may escape the sharp spoon, and that the stream of water will only remove such matter as is quite free. The sponging process is tedious, but it leaves the cavity practically dry. The abscess cavity is now a raw space almost comparable to that which would be left after the removal of a large and adherent tumour. If the proceeding have been successful, the great space should be free of all altered pus, and bared of all the lining membrane. In deep abscesses it cannot always be demonstrated that this has been done, but no pains should be spared in endeavouring to effect it. The operation may occupy more than sixty minutes when deeply placed abscesses in adults are being dealt with. The oozing of blood, which is at first considerable, soon ceases, and the last sponge used should be withdrawn practically unsoiled. The incision is now closed entirely with silkworm gut sutures. No antiseptic is introduced into the abscess cavity, and of course no drainage-tube is employed. A dressing of Tillmanns' linen or cotton-wool dusted with iodoform is applied, and, whenever possible, I endeavour to obliterate the abscess cavity to some extent by suitably placed pads and pressure.

The value of the method is illustrated by the cases which are about to be described. In the simplest of these the cure is rapid and complete; the wound heals by first intention; there is no pain and no rise of temperature; the abscess is as completely removed as is a dermoid cyst which has been dissected out. A sufficient time has to elapse to allow of sound healing, and after that the patient may be considered to be well. Examples of such an issue are afforded by Cases 1, 2, and 3. It will be noticed that two of these are instances of large abscesses in patients of seventeen years of age. These are cases which test the value of any measure of treatment. Abscesses in young children often do so well after even the most rudimentary treatment that they can hardly be quoted as demonstrating the superiority of a particular method. Large chronic abscesses in adults are, however, not so amenable to the simpler surgical measures. Had Cases 2 and 3 been treated merely by incision and drainage, there would have been great risk of tedious suppuration, of long confinement in bed, of hectic fever, of a wearisome sinus, and of a greater or lesser degree of exhaustion. As it was, the whole trouble healed up practically under one dressing.

An abscess which has been already opened by a simple incision, and which has become utterly septic, may be treated in the manner described, and may yield an excellent result. This is illustrated by Case 4, in the person of a boy aged fifteen.

In dealing with spinal abscesses certain difficulties arise,

[1] Brit. Med. Journ., Jan. 19th, 1889, and Nov. 1st, 1890; Med.-Chir. Trans., 1889 and 1891.

[2] See Congrès pour l'Étude de la Tubercule, 1re session, 1888, p. 586.

the chief of which depend upon obstacles in the way of the complete evacuation of the abscess and the complete removal of its lining membrane. The depth of the cavity, its great length, and its position within the abdomen (assuming it to have followed the psoas muscle), place difficulties in the way of the treatment I have detailed. In the cases described two of the patients were children and two were adults. In the former the operation was carried out a little late. In one of these the skin gave way, and an open wound resulted. It must be noted, however, how the scraping and irrigation had affected the issue. The cavity seems to have closed almost from the first. It contained no material capable of developing a rapid decomposition. There was no rise of temperature, and the resulting sinus was not long in closing. Cases 7 and 8 (adults) call for little comment. In such examples of abscess, it must be remembered that another element assists in the healing of the suppurating cavity, and that is the long confinement in bed, rendered necessary by the disease in or about the vertebral column. In the last recorded case the abscess was opened twice. It would have been better if the second incision could have been replaced by aspiration and the injection of a solution of iodoform. As the greater part at least of the curdy contents and the thick lining membrane had been already removed, the condition of the cavity was favourable for such treatment. The abscess, however, was comparatively small, and was so deeply placed near the median line as to render aspiration distinctly dangerous. I had already ascertained that its anterior wall was thin, and was in immediate relation with the peritoneum and non-adherent intestine. I think, however, that this should be the treatment aimed at whenever aspiration may be attempted with safety, and the surgeon is satisfied that the abscess cavity has been thoroughly evacuated at the first operation.

CASE 1. *Femoral abscess.*—A girl aged five was admitted on Sept. 19th, 1891, with a very large and deeply placed abscess at the upper and inner part of the right thigh. The child had been lame in the right hip for several months. There was a history of scrofulous disease in the family. On Sept. 26th the abscess was opened by a two-inch incision, and treated as above described. The abscess cavity reached from Poupart's ligament to the middle of the thigh, and was subfascial; it healed by first intention under one dressing. There was no rise of temperature. She left the hospital in thirty-four days, free from lameness or any other symptom.

CASE 2. *Iliac abscess.*—A young woman aged seventeen, anæmic and unhealthy-looking, was admitted on Sept. 24th, 1891, with a tumour in the left iliac fossa, which had at one time been considered to be a dermoid cyst of the ovary. The patient had had strumous glands in the neck; one sister had such glands in the neck now. Her father's brother died of phthisis. The swelling had been noticed eight months; it reached to the margins of the ribs above and to the median line of the abdomen on the inner side. Below it filled the iliac fossa, and extended down the thigh for eight inches below Poupart's ligament. No pain or tenderness was complained of. Menstruation had been absent for five months; spine apparently sound; temperature between 99° and 100·6°; abscess evacuated on Oct. 5th by a three-inch incision close to the anterior superior iliac spine; forty-three ounces of thick pus evacuated with much curdy matter; cavity treated as above described; healed by first intention under one dressing; temperature remained normal. She left the hospital on the twentieth day sound and well. The whole of the iliac fossa was now resonant on percussion, and no trace of the abscess sac could be discovered.

CASE 3. *Iliac abscess.*—A young man aged seventeen, tall and delicate-looking, of a tubercular family, was admitted on Nov. 16th, 1891. An abscess extended from the left iliac fossa on a level with the summit of the iliac crest down the thigh for a distance of two inches and a half below Poupart's ligament. There was no evidence of disease either in the hip-joint or in the spine. The patient had, however, been confined in bed for a period of five months. The abscess was opened on Nov. 20th, just below Poupart's ligament. More than thirty ounces of pus were evacuated and much semi-solid matter was scraped away. The cavity was treated in the manner above described. The wound healed by first intention under one dressing. There was no rise of temperature. The patient, who was enfeebled by long confinement in bed, got up on the twenty-first day, and left the hospital on the forty-second day. Of the abscess sac no trace could be discovered.

CASE 4. *Septic abscess about the hip.*—A boy aged fifteen was admitted on Nov. 16th, 1891. Symptoms of hip disease began two years ago. These improved with rest, but returned as the patient attempted to move again. He had been confined to bed since July last. In that month an abscess was discovered on the upper and outer part of the thigh. This was opened by a medical man by means of a small incision less than one inch in length, and was not drained. Pus had discharged ever since—i.e., for four months. Just before admission the little wound had closed. The patient presented the symptoms of hectic, and was much emaciated. He was miserably ill, and had a troublesome cough. A large abscess with thin walls was evident on the outer side of the thigh. It was opened on Nov. 21st by a six-inch incision. Two pints of very foul pus were let out. The abscess cavity was treated in the manner above described, and the wound was closed. On the eleventh day the thinned skin gave way at one point, but the escape of matter was small, and it was evident that the great abscess cavity was practically closed. There was no rise of temperature, which ran to between normal and 99° a few days after the operation. A small drainage-tube was inserted into the sinus thus produced, and passed in one inch and a half. The discharge soon ceased, and the tube was removed. The patient was up on Jan. 1st, and a few days later the little sinus was soundly healed. On Jan. 20th he was able to move about on crutches, and on the 22nd he left the hospital greatly improved in health and appearance, and with no local symptoms except a stiff hip-joint.

CASE 5. *Spinal abscess in a child.*—A little girl aged seven years was admitted on Feb. 6th, 1890, with a large psoas abscess on the right side actually pointing below Poupart's ligament. There was caries in the lower dorsal region. The thigh was much flexed. The abscess was opened from the loin on Feb. 14th by the incision already recommended, and the cavity was treated in the manner above described. A pint and a half of curdy pus was evacuated. The incision was then closed. In the course of a few days the thin and reddened skin in the groin, where the abscess was pointing, gave way. Later on I reopened the wound in the loin, to allow of more free washing out of the cavity, which soon assumed the dimensions of a small sinus. This in due course healed soundly, and the child's recovery was complete. She was kept in bed several weeks as a precaution, and was discharged cured on June 22nd.

CASE 6. *Spinal abscess in a boy of thirteen.*—The patient was admitted on Feb. 6th, 1891. Several members of his family had died of phthisis. The patient was very ill; his temperature was 103°, and he complained of great pain in the back. A lumbar abscess, dependent upon disease in the lower dorsal spine, was evident. It was incised, irrigated, and scraped on Feb. 14th. Up to this time the temperature had varied between 100° and 103°. Twenty ounces of pus were let out. The wound was then closed. The temperature fell next day to 99°, and soon became normal. On Feb. 19th a fulness appeared at the site of the wound. The wound was opened, and a little pus escaped. No drain was needed, so slight was the discharge. This little sinus was entirely closed on March 18th. After a few more weeks' rest the patient was allowed to leave the hospital on April 7th, and was then quite sound.

CASE 7. *Spinal abscess in an adult; paraplegia.*—The patient, a gentleman aged twenty-two, came under my notice on June 20th, 1890. Symptoms of spinal caries had appeared without apparent cause nine months previously. Complete paraplegia with loss of power over the bladder and rectum had existed since Feb. 20th. There was evidence of disease in the second and third lumbar vertebræ. Some swelling in the right psoas muscle was detected, but it was not sufficiently definite to demand treatment. The patient was kept rigidly in the recumbent position. By January, 1891, the paraplegia was much better, but the condition of the bladder remained unaltered. A psoas abscess on the right side was now evident. It was near to the median line. The patient was a man of exceptional stature, and I came to the conclusion that the abscess could not be reached through the loin. It was opened from the iliac region, and was reached behind the peritoneum with much difficulty. The amount of pus which escaped was estimated at twenty-five ounces. The cavity was dealt with in the

manner already described. Its great depth rendered its complete erasion difficult. The wound was closed. In three weeks' time some swelling was noticed under the firmly healed cicatrix. This was cut into, and a little pus—an ounce or less—escaped. The resulting sinus healed without difficulty. The patient was still kept in the recumbent position. He was allowed to get up on July 20th, 1891, with a spinal jacket on. He had by this time entirely recovered from the paralysis of the lower limbs and the bladder. He spent the rest of the summer at the seaside, and in the late autumn went abroad. No trace of the abscess sac could be discovered, and his recovery was in every respect complete.

CASE 8. *Spinal abscess in an adult.*—A gentleman aged twenty-eight had complained of spinal symptoms since 1886. In this year deformity and rigidity of the lumbar spine were noticed, the most prominent spinal process being that of the first lumbar vertebra. The pain in the back became more severe and spinal supports were worn. With the aid of these the patient, who was a very active man, was enabled to attend to his profession. I saw him in January, 1890. He then had a large psoas abscess on the right side; no paraplegia or other signs of paralysis. On Feb. 9th, 1890, I opened the abscess through the loin incision. It was reached with difficulty, owing to its having avoided the lumbar region; a pint and a half of very thick pus was evacuated. I was able to examine with the finger the bodies of the lumbar vertebræ, and found them free from any active disease. They had, however, been considerably deformed by old caries. The abscess cavity was treated in the manner already described, and the wound was closed. The patient was kept absolutely rigid upon the back. Six weeks after this operation I discovered once more a fulness in the right psoas, together with distinct fluctuation. The swelling was close to the median line. I was convinced that aspiration would be dangerous. The pus could not be reached from the front without penetrating the peritoneum, and the depth of the collection from the loin rendered a determined puncture in that direction distinctly hazardous. I once more opened the abscess from the loin, cutting through the firmly healed scar. Owing to its depth and comparatively small size I had very considerable difficulty in reaching the collection. Only six ounces were evacuated, which were composed of thin laudable pus, serum, and blood. The first abscess had contained much curdy or semi-caseous matter, but there was none in this. The abscess was treated in the same manner as before, and the wound was once more closed. It healed soundly by first intention. The patient was kept upon his back until June 1st, 1891, when he was allowed to get up with a spinal jacket. For some months after the second operation the site of the abscess sac could be made out on palpation, but no fluctuation was ever discovered. In due course all trace of the sac disappeared, and the patient's recovery has been in every way complete.

ON "POST-EXPIRATION" FRICTION SOUND.

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A PHYSICAL SIGN of pulmonary or cardiac disease which has escaped, or appears to have escaped, the observation of clinical investigators can hardly be one that is either very evident or very common; and there is this unfortunate circumstance connected with any stethoscopic sign, such as the one to which I am about to refer, that it is essentially a matter of personal observation and capable of demonstration to so very limited a degree. I feel therefore, and have felt from the first, at a disadvantage in dealing with a question of this kind; but I can say at the same time that it has made me the more severely critical of my own observation, and slow to proclaim the result. Indeed it is chiefly with the hope of eliciting corroboration that I do this now, and I am far from thinking that there is anything of essential value in the point that I am about to notice, or that I have anything in the way of a discovery to bring before the profession. I only say that I cannot find any reference in any text-book with which I am acquainted to this "post-expiration" friction sound, as I would call it. I have no record of when my attention was first directed to this particular form of friction sound, and for that reason I shall be more precise in narrating how I referred to it when I noted it for the first time in my ward journal.

J. C——, a miner aged forty-seven, was admitted to Ward 12 of the Glasgow Royal Infirmary, under my care, on Sept. 2nd, 1887, suffering, as was said, from "bronchitis." The report of my then resident physician (Dr. Ord) states that the patient had to give up his work a fortnight previous to admission on account of a pain in the left side attended with difficulty of breathing, severe cough, and very little expectoration. On physical examination he found that there was some slight dulness at the base of the left lung posteriorly, and that a little higher up friction sound was heard. There was no evidence of disease of any other organ. On the following morning I detected the friction under the left scapula, and had my attention at once arrested by the peculiar short jerky rub that succeeded each expiration—i.e., it followed the completed expiration movement of the chest wall. The peculiarity was quite distinct, and was easily recognised by my assistant and the senior students. I spoke of its being no novelty to myself, although they would not find it referred to in their text-books, and added that I would be glad to hear from any of them, should they happen to meet with it in their practice. For the next few days the phenomenon was freely discussed by us, and I pointed out that it seemed as if the one roughened pleural surface was caught and held by the other, and only set free with a sudden jerk when expiration was completed; or else that some further movement of the visceral pleural surface occurred after the costal expiratory movement had ceased. The friction sound and the other symptoms and signs of pleurisy gradually passed off; there was nothing else of special interest in the case, and the patient was dismissed well on Oct. 7th. The matter not being of any great practical importance, I determined that I would wait for one more example of the phenomenon before putting it on record, and I do not think I shall be charged with a too lively imagination when I say that I did not hear it again unmistakably until a few weeks ago, although I have had many opportunities of listening to friction sound since then, and of studying it quietly and at leisure in hospital. I shall confine myself almost entirely to the relevant features of the case.

P. D——, twenty-seven, labourer, was admitted on Jan. 19th, 1892, to Ward 7 of the Royal Infirmary, complaining of "bronchitis" of two weeks' duration. He was very ill and weak on admission, and only a partial physical examination of his chest was made. Under Jan. 22nd there is a note of a comparatively rapid examination by myself—rapid because the patient was still weak and very short of breath. I found that there was little respiratory murmur to be heard over the lower half of both lungs posteriorly, and what was heard was accompanied by fine mucous râles, with here and there a faint cooing râle. I concluded that the patient was suffering from a diffused broncho-pneumonia. Again, on January 25th, I made a pretty full note, but will only quote the closing paragraph: "Dr. Anderson particularly notes at various points over the lower right lung posteriorly a râle or sound of some kind that is certainly 'post expiratory'; that is, it occurs after expiration movement of the chest wall has ceased—a shuffling or rubbing-like sound; but the character of the sound itself is not such as to point quite definitely to friction, though suggestive of it. To this extent the sound is corroborated by Dr. Scott Macgregor and Dr. J. A. Wilson. Dr. Anderson hears it again by immediate auscultation." This is the note as it stands. I meant that without being committed to the pathological explanation, but considered simply as a physical phenomenon, my tutorial assistant and my house physician were quite certain that the sound occurred *after* each completed expiratory movement. This friction-like sound was, on this first occasion of its being heard, concealed to some extent by other râles, and I was anxious to exercise every care in the investigation. But on the next day (Jan. 26th) there is the following note:—"To-day Dr. Anderson observed that the râles had cleared up considerably, and that the sound which yesterday he heard through these râles, and thought was pleuritic friction, comes out now quite distinctly, and there is no doubt in his mind as to its being friction occuring after expiration." On the 27th I note that "the post-expiratory phenomenon has quite disappeared," and, beyond the suspicion of its

being heard once on the left side, there is no further reference to it. The notes that follow deal entirely with the increasing gravity of the case from the advancing implication of the lungs themselves. The patient died on Jan. 31st.

A post-mortem examination was made on Feb. 3rd by Dr. Lindsay Steven, pathologist to the infirmary. His summary of the lung condition is: "Emphysema; right pleurisy; left pleuro-pneumonia; bronchitis;" and he goes on to say—"the right lung is extremely emphysematous, and almost its whole pleural surface covered with a very slight fibrinous exudation. The bronchial mucous membrane is intensely congested, and muco-purulent material issues from the fine branches. At the base of the left lung there is a pretty copious recent fibrinous exudation corresponding in extent to an area of solidified lung tissue. In the lower lobe the solidified lung sinks in water, and presents the characters of red hepatisation. It is obvious that the patient has been developing a pleuro-pneumonia in the left lung; the bronchial mucous membrane is also extremely congested." I was present at the post-mortem examination, and saw no such roughening of the pleura as would be likely to make the one surface actually catch on the other; but then it will be observed that during the last five days of the patient's life there was no post-expiration sound heard.

With regard to the cause of this particular form of friction sound, there can be little doubt that the catching of the one surface on the other, and movement of the lung after the costal contraction of expiration has ceased, may both be factors in its production. The play of the one surface on the other, noiseless and frictionless in health, needs no remark; but it is also recognised that the lungs themselves, even at the end of expiration, are to some degree in a state of distension. "The elastic pulmonary tissue," says Foster, "is always to a certain extent on the stretch; it is always, so to speak, striving to pull asunder the pulmonary from the parietal pleura." Might we not rather say, at least of the lower lateral and posterior regions, "striving to pull down the pulmonary along the parietal pleura?" In the last case I imagine that it is quite likely that the movement of the lung surface after costal movement had ceased was the chief cause of the phenomenon; but my recollection of the other examples, of the sudden sharp sound like that occasioned by an elastic band being set free, conspicuously different from the rhythm of respiratory movement of any kind, completely convinces me that in these earlier cases the one surface was for the instant actually held by the other, and then suddenly let go. But I said I would do little more than record the fact. I would only add that of course in the case of the emphysematous chest the movement of air within the lung, especially if there be bronchitis, may often be conveyed to the ear after costal movement over the affected area has ceased, for obviously there might be almost no movement at all. But while that is also not without interest, the question is not now before us, and there was neither the emphysematous chest wall in any of the cases observed (though Dr. Steven found emphysema of one lung itself), nor did I ever confine my attention to the movement of any one part of the thorax, but observed it as a whole.

Glasgow.

REMARKS ON SOME FORMS OF ACUTE URINE FEVER IN SURGICAL PRACTICE.[1]

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RESEARCH has made considerable progress since Civiale published his important treatise[2] on the subject, and we have now to discuss the pathology of urine fever from a bacteriological as well as a clinical aspect. It is, however, to the latter I shall chiefly address myself. In order that I may be as brief as possible, let me mention in a few words the type of cases I am referring to.

CASE 1.—A patient with a urethral stricture, but otherwise in good health and without any physical evidence of kidney disease, undergoes the comparatively slight operation of internal urethrotomy. Within a short time afterwards he is seized with a rigor, his temperature suddenly rises, and he perspires freely. This process, resembling in some respects a malarial fever, may or may not be repeated one or more times, and the patient makes a good and rapid recovery.

CASE 2.—To take another illustration, such as one amongst those recorded by Mr. Mitchell Banks.[3] A man about thirty years of age had a small bougie passed through a tight and long stricture commencing at two inches from the meatus, having on previous occasions, at short intervals, submitted to a similar proceeding. Half an hour afterwards he vomited, a rigor supervened, and the vomiting continued. Then the rigor was repeated, accompanied with a rapid pulse; a convulsive tremor followed, and death took place six hours and a half after the introduction of the bougie. Post-mortem examination records that beyond the presence of a long stricture and some slight congestion of the kidney all the organs of the body were healthy.

CASE 3.—I have published the particulars of the following case.[4] In 1886 I saw a healthy boy aged eleven years who had partially ruptured his membranous urethra by falling astride on his perineum. With a little trouble I passed a catheter and drew off over a pint of bloody urine. The catheter was retained. Forty-two hours after the injury he was seized with convulsions, which recurred at intervals, with much violence, attended with opisthotonos. He could not swallow though the jaws were not fixed, and he became comatose and died in eight hours after the convulsions set in, that is to say, fifty hours after the accident. An hour before death he had a temperature of 104° F. There was no post-mortem examination.

These cases, I submit, all belong to the same group, and though fatal instances are comparatively rare, most surgeons must have seen illustrations of them. That effects such as here shown are coincident with or consequent on bacteriological changes, primarily in the part injured and secondly by systemic infection, there can, I think, be no doubt. This aspect has been well studied by Dr. Noël Halle,[5] and the results of his investigations in M. Guyon's laboratory at the Necker Hospital are worthy of careful attention. It is to the clinical conditions which seem to favour or hinder the production of such bacteriological changes that I wish briefly to allude.

I was led up to making these observations by noticing the differences relative to the liability to a distinctive fever that existed between various kinds of lesions of the urinary apparatus. For instance, such an effect was rarely observed after cutting operations for the removal of stone from the bladder, or after perineal section for stricture, whilst in some degree it commonly occurred after internal urethrotomy. In a paper on this subject the late Mr. Teevan[6] referred to the frequency of rigors and fever after this operation as amounting to about two-thirds of his cases, a proportion much in excess of what is now observed where antiseptics are employed. Again, in accidental lesions of the deep urethra unattended with any breach of skin surface, as in those caused by falls on the perineum, it was frequently noted that rigors and fever supervened where their treatment was attempted by the retention of a catheter in the bladder by the side of which urine leakage took place, whereas in those instances where continuous urine drainage was provided by a free perineal incision such effects did not usually follow. Further, the occurrence of fever seemed in no way influenced by the degree of the lesion that was inflicted, some of the worst effects being noted after the passage of a bougie or catheter where the wound was extremely small, perhaps not amounting to more than an abrasion of the protective epithelium lining the urethra. Observations such as these appeared to indicate that certain distinctions in the mechanical construction of wounds were more potent contributory causes of what followed than mere textural limitations.

In view of such differences and the extreme frequency with which internal urethrotomy was then followed by varying degrees of fever, in some instances terminating

[1] Read in the discussion on Le Pathogénie des Accidents Infectieux chez les Urinaires at the Congrès Français de Chirurgie, April 20th, 1892.

[2] Nouvelles Recherches sur la Fièvre et quelques Phlegmasies spéciales qu'on observe dans les Maladies des Organes Génito-urinaires. 1860.

[3] Edinburgh Medical Journal, June, 1871.

[4] Surgical Disorders of the Urinary Organs, third edition, Churchill, 1887.

[5] De l'Infection Urinaire: Annales des Maladies des Organes Génito-urinaires. Paris, Feb. 1892.

[6] Brit. Med. Jour., March 16th, 1878.

fatally with suppression of urine, and also having regard to the more permanent improvement of the stricture by the completeness of the rest afforded, I materially altered my plan of procedure. In a number of cases of advanced urethral stricture in the deep urethra, which did not yield to treatment by dilatation, I first made a section of the contraction from within the canal by Maisonneuve's urethrotome. This at once permitted the passage of a full-sized grooved staff, such as is employed in median lithotomy, along the urethra into the bladder. The patient being next placed in the lithotomy position, the median perineal boutonnière operation was then practised solely for the introduction of a gum-elastic drainage-tube of full calibre into the bladder. This was secured in position by tapes so as to cause the whole of the urine as excreted to escape through it. The drainage-tube was usually retained for about seven days and then withdrawn. As the perineal wound proceeded to heal, as it usually did in the course of a few days, a bougie was passed from time to time along the whole length of the urethra, so as to maintain the normal dimensions of the canal. Fuller particulars of this proceeding, together with a number of illustrative cases, were published some years ago,[7] and I have since continued to practise it in some kinds of advanced urethral stricture in preference to the ordinary form of perineal section, to which it only has a slight resemblance. The point, however, upon which I desire to lay stress in connexion with this proceeding is this—that the combination of internal urethrotomy with means for securing efficient urine drainage, independently of antiseptics, entirely prevented the rigors and fever such as were constantly observed when internal urethrotomy was alone practised—any exceptions to this rule being directly traceable to faulty urine drainage. In twenty-three consecutive cases where the double proceeding was practised, neither rigors nor fever were observed, the elevations of temperature, which were rarely noted, being such as are met with in the simplest forms of surgical practice. These observations corresponded with what was noted in connexion with the treatment of accidental lesions of the male urethra from falls and blows on the perineum, where the conditions were similar. From my experience of the rigors and feverish elevation of temperature occurring in connexion with lesions and operations involving the urinary apparatus, there appears to be only one form which is difficult of explanation by any septic view. This is the shivering which not unfrequently supervenes, when, after lithotomy and operations of a similar kind, urine is passed naturally along the whole length of the urethra for the first time. For some years past I have been practising perineal section of the enlarged prostate, when it caused such a degree of obstruction to micturition as not to be amenable either to catheterism or any other form of treatment. After division of the obstruction has been effected in this way a gum-elastic drainage-tube is introduced into the bladder and retained for some days, according to circumstances, so as to render the prostatic section permanent. Then the drainage-tube is removed and the perineal wound allowed to heal. I have now done a considerable number of these operations, and have frequently noted that when natural urination is for the first time resumed quite a sharp shivering attack almost immediately supervenes. This is usually followed by elevations of temperature which decline in a day or so. Two recent instances will be stated.

CASE 4.—On Feb. 9th, 1892, when performing lithotrity for a patient aged forty-nine, with a urate stone, a large triangular fragment became so firmly impacted in the urethra in front of the prostate that I completed the operation by a median cystotomy, through which I readily extracted all the débris. I put a large drainage-tube into the bladder. His temperature remained normal till the twelfth day, when he micturated naturally. This was immediately followed by a sharp rigor and an elevation of temperature to 100·4° F. No further rigors were noted, and recovery proceeded without interruption.

CASE 5.—On Feb. 27th, 1892, I divided the prostate of a patient aged fifty-three, who had been suffering from difficult urination, due to hypertrophy of the floor of the prostate for five years, having been entirely dependent on the use of the catheter for over one year. The latter became so irksome and painful to him that he determined to have the floor of the gland divided. This was done, and a drainage-tube introduced. No rigors or elevation of temperature followed. On the twentieth day the drainage-tube was removed, and he shortly afterwards micturated naturally for the first time for over a year. This was followed by a sensation of chilliness, headache, an elevation of temperature to 101·4° F., and a dryness of the skin with thirst. These symptoms declined, a free diaphoresis took place, and recovery was complete.

What is the significance of these manifestations? I believe their causation to be quite distinct from those previously referred to. In the first place, the sensation of chilliness commences on the conclusion of the first act of normal micturition; it does not usually recur; there is no incubative period. I am not aware of any evidence to show that these symptoms ever, either immediately or remotely, proved fatal or even serious, nor have any indications of a systemic or an infective nature, such as suppression of urine or suppuration, been observed in connexion with them. A rigor and the reaction following it is to be regarded as an expression on the part of the nervous system. It is by the circumstances attending the various manifestations of such a phenomenon that we are to judge how far the causes producing it are analogous. For the reasons I have stated it would appear that there is no correspondence in the two sets of conditions I have illustrated. Clinical observations relative to the whole subject seem to justify the conclusions (1) that the occurrence of a distinctive variety of acute fever following wounds of the urinary apparatus is largely determined by defective urine drainage; and (2) that the fever following these lesions is toxic and not neurotic.

In drawing the conclusion that urine fever is septic, I have not ventured to express an opinion as to the nature of the poison. Whether the poisonous effects are due to micro-organisms or to an alkaloid such as Bouchard[8] has described, has yet to be worked out. As bearing upon this point, let me quote a passage from an address by the late Dr. Austin Flint:[9] "The supreme objects of study in pathology at the present time are the discovery of micro-organisms and their natural history. But these agents, it is probable, are pathogenetic—not directly, but indirectly, by means of the toxical products of their activity. What are these products, and how do they give rise to the phenomena of disease? We may ask the same question of certain of the poisons introduced from without the body. How is it that fractional quantities of morphia, hyoscyamin, strychnia, aconitia, atropia, and other alkaloids produce their lethal effects? It conveys no adequate information to say that they act upon the nervous system. This is merely the statement of a fact, not an explanation. For the latter we must look to the organic chemistry of the future."

Lower Berkeley-street, W.

[7] Ibid., July 18th, 1885.

[8] Sur les Poisons qui existent normalement dans l'Organisme et en particulière sur la Toxicité urinaire: Gazette Hebdomadaire, April, 1886.

[9] The Medicine of the Future: Brit. Med. Jour., 1886.

VACUOLATION OF NERVE-CELL NUCLEI IN THE CORTEX IN TWO CASES OF CEREBRAL CONCUSSION.

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WHATEVER views may be held as to the function of nerve nuclei by various authorities, there appears to be a consensus of opinion as to the importance of the nucleus of the cell in maintaining the vitality and function of the chain of nerve connexion in which it is a prominent factor. According to Meynert, "the nucleus exercises a nutritive influence over the albuminoid protoplasm of the cell; and the nutrition of axis cylinders and of their prolongations, some of which become nerve cylinders, is effected in a similar manner."[1] According to Bevan Lewis,[2] the nucleus exercises an inhibitory action upon the special function of the protoplasm of its cell. But there are two different opinions entertained as to the nature of the nerve cell itself, and consequently as to the inherent relation of the nucleus to the cell substance. The first opinion is what I shall call the *ganglionic theory*.

[1] Psychiatry, p. 245. [2] Text-book of Mental Diseases.

It is rather upheld by Max Schultze. This writer says: "Thus the cell constitutes a common point of union of numerous separate fibrils proceeding from widely different regions of the nervous system; and whilst one of these associated bundles becomes the axis cylinder of a fibre, and after becoming invested by a medullary sheath immediately runs peripherally, the others pass in unknown directions."[3] This view receives the support of many physiologists; recently Mercier[4] appears to take it for granted in an argument by which he endeavours to show from a teleological point of view the necessity for adopting this doctrine.

Such a view of nerve cells places them in the position of minute ganglia through which bundles of nerve fibrils pass in all directions, receiving in their passage nutritive and functional stimuli from the nucleus, which latter is said to be composed of embryonic protoplasm.[5] Certainly, the nuclear substance differs from the cell protoplasm in that it is not affected by dilute acids which destroy the cell substance. Further, it stains more intensely with some reagents (for example, hæmatoxylin) than does protoplasm; and, on the other hand, it remains unstained by reagents which colour protoplasm intensely—for example, chloride of gold.[6] The second view—that which regards the nerve cell as an independent unit from which arise the various cell processes—is championed by Meynert,[7] who shows that in young cells the nucleus is pyramidally shaped, like the cell itself, and that the angles and points of the nucleus are frequently produced into the processes of the cells—in short, that the axis cylinders are prolongations of the nucleus. This view is supported by Kühne's[8] researches, which show that both the nerve cells and the axis cylinders give the reaction for albumen, a kind of albumen which is insoluble in a 10 per cent. solution of chloride of sodium. Moreover, Mayer[9] has shown the continuation of the axis cylinder into the nucleolus. The same fact is supported by the observations of Beale.[10]

The whole question unfortunately still remains unsolved, for the lines of Schultze, which are so graphically represented in illustrations of large ganglionic cells running from process to process of the cell, and forming concentric circles round the nucleus, have been placed in an entirely new light. This striation, which Remak and Schultze[11] describe as fibrillar markings upon axis cylinders indicating bundles of nerve fibrils passing through the cell, has been shown by Rumpf to be folds of a keratoid sheath enveloping the cell, its processes, and the nerve fibres. There is, therefore, no direct observation upon the exact relation of the nucleus to the cell contents, and especially to nerve fibrils; but the strong presumption is that the axis cylinders and the cell processes originate in nerve nuclei. The reasons for this assumption are summarised by Meynert[12] as follows:—1. Because from the earliest period the nerve cells are independent units, and, according to Boll, the matrix protoplasm is the fused remnant of broken-up cells. 2. The cell processes originally start in the ganglion cell, and are mere prolongations of its protoplasm. 3. The axis cylinder develops out of special spindle cells in the meduliary region, the protoplasm of which is continued into the grey substance of the cortex, and there splits up into very delicate fibrils which connect with the finest ramifications of the ganglionic processes. One fact is assured—viz., that the function of the cell nucleus in the cerebral cortex is of comparatively immense importance, for nowhere else in the body, except in the ovum, does the nucleus occupy so large a proportion of the cell space.[13]

The causes of nuclear vacuolation and the conditions under which it has been found to exist.—1. It has been held to be due to poisoning by phosphorus, antimony, or arsenic. Voit and Bauer produced vacuolation of the ganglionic cells of the spinal cord of dogs by poisoning the animals with phosphorus. Drs. Elkins and Middlemass[14] publish a case of phosphorus poisoning in which vacuolation of the nucleus, chiefly in the cells of the fourth layer, occurred conspicuously; and after a full description of the macroscopic and microscopic changes in the various organs of the body, they conclude "that the nervous system does not escape the action (fatty degeneration) which we know is capable of being produced by that poison in other organs. 2. It occurs in the course of various chronic degenerative changes in the brain, which are most commonly met with among the insane. Chief among those changes are the results of chronic alcoholic poisoning, where vacuolation of the nucleus may be met with throughout large areas of the sensory cortex. According to Bevan Lewis[15] vacuolation of the nucleus is most commonly met with in the small cells of the second layer, and in that position constitutes the essential lesion of idiopathic epilepsy. He considers that in univacuolated cells the nucleus is the primary seat of the disease, and that the vacuolation is probably due to an intrinsic morbid factor in the cell itself.[16] Dr. James R. Whitwell,[17] in an article on the Nervous Element in Myxœdema, points out this condition to be one of the prominent pathological cerebral characteristics of that disease. In his report he states that the cells of the third and fourth layer were chiefly affected. In the cases which I describe below, and in which the changes were due, I think, entirely to direct cerebral violence, the vacuolation of the nuclei exists chiefly in the third and fourth layers of the motor and frontal cortex, and are in one of the cases only faintly apparent in the layers of the occipital and specially sensory cortex.

The manner in which head injuries act upon the brain cell is undoubtedly by affecting the blood and lymph circulation in the perivascular channels and the pericellular sacs. The reasons for holding this view are:—1. The extreme rapidity of the occurrence of the pathological change in question—after concussion, for instance. In Dr. Miles'[18] experiments the cellular degeneration was produced within fifty hours, and in one of the following cases within forty-eight hours. 2. The larger cells suffer primarily and chiefly. It is quite conceivable, and the theory is supported upon the authority of Ross,[19] and may, I think, be conceded that the larger cells suffer earlier than the smaller ones because of their greater bulk, and that their nuclei are principally affected on account of their distance from the circulating lymph and the consequent nutritive disadvantage of position. Where there is an interference with the free circulation of pericellular lymph, it is quite apparent that its action on the cell should be poisonous and destructive. Normal cerebral lymph is an alkaline fluid. After death,[20] or in pathological conditions,[21] it becomes acid. The chemical nutritive action of an alkaline secretion one would be inclined to suppose on *a priori* grounds to be entirely different from that of an acid one. That a vascular change accompanies chronic cell degeneration in insanity—such as alcoholism, general paralysis, and dementia—is undoubted, but the disputed point has all along been whether the cell degeneration or the vascular change was primary. That question, however, is not suitable for discussion here, but it may on all hands be conceded that a vicious circle of cause and effect is established.

In phosphorus poisoning the constituent elements of the vascular system seem to be simultaneously affected with the epithelial and other cells, including nerve cells,[22] the change which takes place being a nutritive one, and consisting in the rapid disintegration of albumen and its conversion into fat.[23] The cell change in concussion is undoubtedly of primary vascular origin, although, according to Miles,[24] there are actual gross protoplasmic disturbances in the cell, such as displacement of the nucleus and commencing pigmentation of the cell protoplasm. Duret[25] describes the vascular changes that occur after severe concussion. He states that there is first of all extreme vaso-motor contraction, due to over-stimula-

[3] Stricker's Manual of Histology, vol. i., p. 185.
[4] The Nervous System and the Mind, pp. 34–38.
[5] Schultze: Stricker's Manual, vol. i., p. 186.
[6] Quain's Anatomy, vol. ii., p. 10.
[7] Stricker's Manual, vol. ii., 388.
[8] Meynert: Psychiatry, p. 232.
[9] Stricker's Manual, vol. ii., p. 548.
[10] Transactions of the Royal Society, vol. cliii., p. 543.
[11] Stricker's Handbook, vol. i., p. 170.
[12] Psychiatry, pp. 63 and 64.
[13] Quain's Anatomy, vol. i., p. 11 et seq.
[14] Brit. Med. Jour., vol. ii. 1891, p. 1302.
[15] Loc. cit., p. 523.
[16] Text-book of Mental Diseases, pp. 481–2.
[17] Brit. Med. Jour., vol. i. 1892, p. 430.
[18] Vide Report from Laboratory of the Royal College of Physicians, Edinburgh, 1892.
[19] Diseases of the Nervous System, vol. i.
[20] Meynert: Psychiatry, p. 235.
[21] Heynius and Preyer, quoted from Batty Tuke, Brit. Med. Jour., vol. i. 1890, p. 10.
[22] Elkins and Middlemass, loc. cit. Voit and Bauer, loc. cit.
[23] Lauder Brunton: Therapeutics, p. 711.
[24] Loc. cit.
[25] Traumatismes Cérébraux, pp. 70–73.

tion of the vaso-constrictor centre in the floor of the fourth ventricle and the restiform bodies, by the excessive and sudden accumulation of cerebro-spinal fluid in that cavity, and that after a longer or shorter interval there is vaso-motor paralysis of the cortical arteries with consequent dilatation of their walls, and a tendency to congestion and stasis.

Again, Meynert[26] holds that the cortex itself is a vaso-motor centre which, when active, inhibits the lower (sub-cortical) centre, thus causing dilatation of its own arterial system. It thus becomes a workable theory that in concussion there is first arterial contraction due to mechanical stimulation of the vaso-motor centre in the medulla, and, secondly, arterial dilatation due to a morbid activity of cortical cells after the shock-producing inhibition of the same vaso-motor centre. The bearing of these observations upon the question of cell nutrition and cell degeneration is not affected by the fact that in the majority of cases the condition of vaso-motor paralysis is a temporary one. It may be sufficiently prolonged to produce death by impairing the nutrition of the thermotaxic cells in the motor cortex,[27] or it may occur some time after the injury, or, again, it may be permanent,[28] producing delirium, insanity, coma, or death.

CASE 1.—Male, aged fifty-six, a monomaniac, with delusions of grandeur, who had been insane for at least six years, fell backwards upon a stone floor. The occipital part of his head came into violent collision with the floor, producing fracture of the base of the skull, as was manifest shortly afterwards from the bleeding at the ears and nose. He became slowly comatose, and in seven or eight hours after the receipt of the injury he could with difficulty be awakened. This condition deepened, and he gradually sank, the vital functions becoming perceptibly weaker; he died forty-seven hours and three-quarters after the injury. On post-mortem examination a basal fracture of the skull was found passing from behind the foramen magnum, and ending in the petrous portion of the temporal bone of the right side. The left lobe of the cerebellum and the tip of the right frontal lobe were lacerated as the result in the latter case of *contre-coup*. The laceration was so pulpy as to bear out Duret's theory of the movements of the cerebro-spinal fluid during concussion and his *cone soulèvement*.[29] The amount of blood effused inside the cranium, considering the extensive nature of the injuries, was extremely small, being not, in my opinion, sufficient to produce the so-called pressure symptoms. Compression as a theory to account for death after head injuries has hitherto been too universally accepted, and it is necessary carefully to discriminate between cases of actual compression due to effused blood and cases where the amount of blood effused is insufficient to account for the symptoms. This patient died in the reaction stage, or the stage of vaso-motor paresis, or what Mr. Hutchinson calls the sleepy stage of concussion.

CASE 2.—A young man aged seventeen was admitted to this asylum in a state of delirious mania. Two or three days previous to admission he had been struck on the back of the head with a stone by another lad. From the symptoms described by his friends he had evidently suffered from concussion at the time. That evening and during the day following the accident he complained of intolerable *frontal* headache, and on the succeeding day thereafter he became maniacal. When admitted his temperature was 99° F., it gradually rose, until on the third day after admission it stood morning and evening at 101·4°. From that day until the day of his death there was a steady fall of the temperature. On the latter day the thermometer registered 96·8° F. His extremities became cold and the radial pulse imperceptible upon the fourth day after admission. These symptoms of failing vitality resisted the most stimulating treatment. Post-mortem examination revealed a fissure fracture a little to the left of the occipital protuberance. There was no depression, no meningitis, and no effusion; nor was there laceration of the brain, or hæmorrhage into any part of the cortex or ganglia of the brain. This, then, is an uncomplicated case of cerebral concussion, which corresponds to Duret's description of fatal concussion, where, as he says, the vascular paralysis passes into inflammatory reaction, when the nervous symptoms persist until death closes the scene.[30] At another part of his work he says: "Sometimes after the loss of consciousness there is recovery, which lasts for one or for many hours; there may even be complete restoration. Then the animal becomes gradually comatose, his faculties become overclouded, and he falls into a deep sleep."[31] We see, then, from the results of Duret's experiments, and from his observations, that vascular paralysis, passing on to a state equivalent to inflammatory congestion, may supervene at a considerable time after concussion.

Microscopic changes in the brain in both cases.—In both cases in the cells of the third and fourth layer of the motor and frontal regions there were universally found distinct, refractile particles in the centre of the nucleus. These were without question vacuoles. In some nuclei I counted as many as three of these bright spots, but in the great majority of cells only one vacuole occupies the centre of a nucleus. In Case 2 the affected cell nuclei are large and swollen, irregular in outline and shape, and stain (Bevan Lewis's method) very darkly with aniline blue-black. The cell processes for some reason do not stain well, giving an appearance as if they were broken off or stunted. In Case 1 the nuclei do not seem to be enlarged, but there is extensive granular and commencing pigmentary degeneration of the cell protoplasm. I do not attach any importance to these latter changes, for although they may possibly bear some relation to the injury, yet they are so commonly met with in the brains of persons labouring under chronic insanity that they must be discounted in the present case. With regard to the localisation of the lesions in both cases, I have already referred to the greater immunity of the smaller cells of the cortex from the effects of rapid nutritive changes. It must, however, be admitted that there are cells in the regions of the brain posterior to the ascending parietal convolution larger than many of the affected cells in front of Rolando's fissure. How, then, can the immunity of such cells in the posterior cortical regions be accounted for? To quote Duret again:[32] "Each variety of shock most frequently produces its special lesions at the place of *contre-coup* ["suivant le lieu de sa repercussion."]..... When the shock is applied to the occiput the effects are seen in the frontal lobes and at the posterior part of the hemispheres. This is undoubtedly the case, and we are justified in attributing the cellular change to the effects of *contre-coup*, as in both cases the force was applied to the occipital region of the head. Meynert[33] points out that functional hyperæmia of the cortex differs from that of any other organ, such as the liver, in that it is capable of being localised to functionating regions; all other regions not associated at the time remain non-hyperæmic. If, then, after dynamic or inherent molecular disturbance, such as must be caused by direct force and the apnœic state caused by vascular spasm, there is a morbid exaltation of cell energy, there will be an accompanying hyperæmia limited to, or chiefly limited to, the region of nervous hyper-excitation, and this condition may persist.

My conclusions, then, are: (1) That a nuclear nerve cell lesion in the cortex is a condition of great importance, and indicates an interference with the vitality and function of the cell; (2) that it is capable of being produced by vascular changes which affect the nutrition of the cell; (3) that when the lesion is situated chiefly in the motor cortex it tends to interfere with the vital functions by the implication of the thermotaxic cells; (4) that important vaso-motor changes occur after concussion which are the result either of exhaustion of the subcortical vaso-motor centres from over-pressure or of their inhibition by hyperaction of the cortical cells implicated.

Carbert, Scotland.

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[26] Psychiatry, p. 251.
[27] Vide Mr. Horsley's paper on Linear Craniectomy, Brit. Med. Jour., vol. i 1891, p. 579.
[28] Duret, loc. cit.
[29] Loc. cit.
[30] Loc. cit., p. 153.
[31] Loc. cit., p. 72.
[32] Loc. cit., p. 156.
[33] Psychiatry, p. 214.

ST. MARY ABBOTTS' INFIRMARY.—Professor Klein, F.R.S., on the 14th inst., gave a demonstration, with the aid of the oxy-hydrogen light, "On the part played by Organisms in Disease" to the staff of the infirmary.

A NEW HOSPITAL FOR INFECTIOUS DISEASES.—The Rugby Local Board has agreed (subject to the approval of the Local Government Board) to purchase twenty acres of land, known as "Croop-hill," for the purpose of erecting a hospital for infectious diseases.

ACUTE INTESTINAL OBSTRUCTION DUE TO A LARGE GALL-STONE; OPERATION.

BY A. A. BROCKATT, M.D. BRUX., L.R.C.P. LOND., &c.

J. B——, aged forty-three, had been a village schoolmaster for the last seventeen years and led a sedentary life. He had lived well for his position, indulged in a moderate amount of stimulants, and eaten freely. Up to Feb. 22nd, 1891, he had had no illness of any importance. On that date Dr. Murphy of West Malvern was called in for an acute attack of pain in the epigastric region, which subsided in twenty-four hours. The pain does not appear to have had the character of biliary colic. There was no jaundice or vomiting, and for some time previously the patient had been taking huge quantities of cod-liver oil, under the impression that his chest was weak. On Dec. 20th, 1891, Dr. Murphy was called in again for a supposed bilious attack. The patient had been vomiting more or less continually for three days, and the first thing that struck Dr. Murphy was the reduction in the size of the patient that had taken place during the six months that had elapsed since he had seen him; previously he had been a man of 14 stone weight, now he was under 12 stone. His face was pale and pinched, with an anxious expression. The vomiting had come on suddenly three days before, and was copious and bile-stained. There was no pain, and for two days the bowels had been confined, notwithstanding he had been taking purgatives. He complained of great thirst, there was entire loss of appetite, and the temperature was normal. There was nothing abnormal to be detected in the abdomen by Dr. Murphy except a distinct feeling of resistance to the right of the umbilicus. He prescribed for him five grains of calomel, to be followed by an enema, and a bismuth mixture. On the 22nd there had been a slight action of the bowels, the vomiting was less frequent, and the patient expressed himself as feeling better. Dr. Murphy administered a copious enema, which was followed by three large stools. The first showed traces of the action of the calomel, and the following were black from the bismuth. There was a great deal of flatus. On the 23rd the patient partook of some chicken, and the vomiting became much more frequent, was very copious, and contained large quantities of bile. He continued in much the same condition until early on Dec. 25th, when the vomit became very offensive and was more or less continuous.

I was called in to see him in the evening, and found the abdomen much distended. He was extremely restless; his pulse was 120 and the tongue dry and brown. He did not complain of pain, which symptom, indeed, he said had been entirely absent during the whole of his illness. It was decided to perform abdominal section early the next morning. On Dec. 26th Dr. Pike administered chloroform to the patient, whose condition was unaltered from the previous night. When under the anæsthetic a hard mass, freely movable, was detected in the right iliac region. I opened the abdomen in the middle line below the umbilicus and found the lump to be a hard mass, which completely blocked the lumen of the small intestine. The intestine above was much distended and around the mass was so tightly stretched that it was completely immovable. The coil of intestine was then brought outside the wound, and, Dr. Murphy holding it firmly above and below the obstruction, I incised it in its long axis opposite the attachment of the mesentery. The obstruction proved to be a large gall-stone, and was easily extracted. The intestine near was then thoroughly washed out and the wound united with Lembert's sutures. Two vessels in the mucous coat, which bled rather freely, were previously tied.

On account of the critical condition of the patient a further examination of the abdomen was out of the question, so the abdominal wound was closed as quickly as possible, and a drainage-tube inserted into the peritoneal cavity. He was ordered nutrient enemata and a grain of opium every six hours. On Dec. 27th the patient had recovered completely from the shock of the operation, and expressed himself as feeling quite well—indeed, he had to be very closely watched to prevent him getting out of bed. His temperature was normal, he had no pain or tenderness, and his pulse was 96. There had been no return of vomiting. The next day he still expressed himself as feeling better. There were no abdominal symptoms, and the wound when dressed was quite healthy. On Dec. 29th, as he felt very weak, a small quantity of milk was ordered to be given every hour in addition to the nutrient enemata. There were still no abdominal symptoms; the drainage-tube was removed. On the following day he was much weaker, so essence of beef and milk were administered in small quantities every quarter of an hour, but he gradually became more exhausted, and died on the afternoon of the 31st, the sixth day after the operation.

Only a partial examination was allowed by the friends. The abdominal wound was healed, except at the part where the drainage-tube had been inserted. There was slight peritonitis of some of the superficial coils of intestine on the right side in the neighbourhood of the intestinal wound. This was firmly united, and was situated high up in the jejunum. On tracing the small intestine upward it was found to be firmly matted together by old adhesions, and the gall-bladder was firmly incorporated with the mass, and could not be separated. The liver was apparently healthy. The gall-stone, an unusually large one, was pear-shaped, and measured 2 in. in length, 1⅞ in its greatest transverse diameter, and 5½ in. in its greatest circumference.

Great Malvern.

THE SCIENTIFIC PRINCIPLES OF INHALATION.

BY ROBERT LEE, M.D. CANTAB., F.R.C.P. LOND.

IN the report of the Medical Officer of the Privy Council, 1875, there is a paper by the late Dr. Baxter on the action of certain disinfectants on vaccine lymph. The chief object of the experiments was to determine whether the vapours of chlorine, sulphur dioxide, and carbolic acid acted on lymph in the same way as their solutions. There was a difficulty at the outset which Dr. Baxter recognised. "It was well-nigh impossible," he said, "to obtain an atmosphere containing a given percentage of the vapour"; and he imagined that if he fixed ivory points charged with vaccine lymph in a bottle containing strong carbolic acid, so that they were about half an inch above the fluid, the vapour would act upon them. Practically it had no effect; for the points answered well when used for vaccinating with. Now, to conclude that the vapour had no effect when he had proved before that the solution had was an error which arose from the fact that carbolic acid does not give off vapour to any active extent at a temperature of from 60° to 65°F. By applying this example to the subject of inhalation it must be evident that it is necessary before we can judge of the value of any vapour we should know something of its strength, just as if it were a solid or a liquid. In the case of carbolic acid we can do this; because if we mix the acid with water in any proportion and then boil the mixture, the steam and the acid are given off together, and in the same proportion as they existed in the water. Thus we can obtain vapour containing any percentage of carbolic acid. But with the turpentines and essential oils which float on the surface of water it does not seem that mixing with water, or rather floating them on water, makes any difference to their volatilisation. If the water be boiled, the bubbles of air rising through the layer of oil have apparently the same effect as a stream of hot air would have, and the amount of oil which volatilises will depend on its temperature of volatilisation.

In the British Pharmacopœia for 1885 six vapours or inhalations were introduced, but no consideration had been given to the important questions which should have been determined before they could be prescribed with any accuracy or practical benefit. In the case of the vapour of hydrocyanic acid, it is simply the question of temperature on which evaporation of the acid depends. With the vapor chlori no vapour ought to be given off when pure chlorinated lime is moistened with cold water, or, as Dr. Baxter remarked, "it is sufficiently obvious that the quantity of chlorine given off into a room from a basin filled with chloride of lime.....would be utterly inadequate to destroy vaccine virus." In the case of the vapor coninæ it may be observed that between six and seven minims of succus conii on a sponge, exposed to the vapour of hot water, must yield a vapour of the feeblest character, for the dose of the juice is from half a drachm to one drachm. At least one would like to

have such vapour analysed before using it in practice. In the vapour of creasote we have one part of creasote with 320 of water, but unless the water were evaporated the amount of creasote given off would be incalculably small. If air be drawn through such a mixture, it might possibly be sterilised, but that is evidently not the intention of this inhalation.

We may pass over the vapour of iodine with the remark that "gently heated" is too inaccurate for practical purposes. The last vapour is the most remarkable—that of oleum pini sylvestris. Forty-two drops of the oil are to be added to one ounce of water. One drachm of this—that is, five minims—is to be added to half a pint of cold water and the same quantity of boiling water. And here we may remark that, as the oil does not mix with water, but floats on the surface, it is impossible to say how much the drachm might contain. But, assuming that there are five minims to a pint of water, we have a proportion of 5 to 9600, or nearly 1 in 2000. What possible effect could be obtained by inhaling air drawn through this solution it would be interesting to know. Now, if there is any practical good in the use of medicinal agents in the form of vapour, of which there is abundant evidence to make one think so, it is clearly necessary that the scientific principles of inhalation should be studied. The chief questions we have to determine, when any particular substance is attempted to be used in vapour form in the treatment of disease, are its point of evaporation and the best mode of converting it from the fluid or solid state to that of vapour. How much there is to be done before we can speak with any certainty of the value of the inhalation of any substance and remedy, until these preliminaries are determined, must be apparent.

Savile-row, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

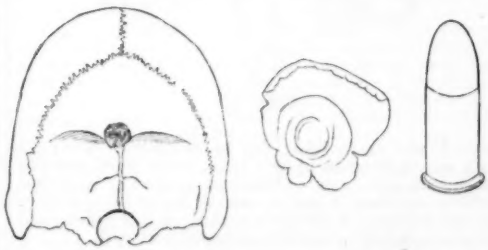
WESTMINSTER HOSPITAL.

BULLET WOUND OF SKULL, THE RESULT OF ATTEMPTED SUICIDE.

(Under the care of Mr. R. DAVY.)

THIS case is an example of one of the milder results of a bullet wound of the skull, the flattening of the bullet against the skull without penetration of the cranial cavity. How far the patient's escape may have been due to the fact that his skull was unusually thick, and how much to the defective nature of the weapon, it is not possible to say. A bullet of somewhat similar calibre and composition was shown for Mr. Croft at the Pathological Society,[1] which had flattened itself against the frontal bone of a patient aged thirty-two. In that case the weapon was discharged by the patient close to the forehead. After death (no cause for which could be found at the post-mortem examination) the skull presented no abnormality. The case also shows the advantage of exploration, for it is impossible to say without full examination in so many instances whether the bullet has lodged on the bone, just within reach after penetration, or gone in beyond hope of recovery.

A man, aged twenty-one, was admitted into Henry Hoare ward under the care of Mr. Richard Davy on Nov. 2nd, 1890. On the Sunday morning (midnight) the patient took a hansom cab after spending the evening at a theatre and restaurant. The driver heard two shots fired in quick succession; he pulled up, knowing that something was wrong, and saw the man's hand to his head, which was bleeding. The cabman at once got assistance, and drove to the Westminster Hospital. At twelve o'clock midday Mr. Davy was sent for. The man had a small bullet wound immediately over his occipital eminence; there was much swelling around the aperture and some free hæmorrhage. The hair was singed, and the aperture was as large as a No. 3 shot. On careful probing through the wound a loose body could be felt, which was assumed to be a splinter of bone. Ether was given, and a crucial cut made through the wound. A flattened bullet was extracted from a dented bed it had made for itself close to the attachment of the ligamentum nuchæ and the complexus muscles. The bullet was blood-stained, and some fibrinous shreds adhered to it. The actual size of the cartridge (Eley's, ·320 gauge),



the compressed bullet, and the position of the bullet on the bone are shown in the engraving. The preparation is now in the museum of the Westminster Hospital. The man was dull and morose, but made an excellent recovery, leaving the hospital on Nov. 10th, 1890, quite well.

Remarks by Mr. DAVY.—The first shot fired might have been attended with danger to the general public or the cabman, for it certainly did not strike the patient; he thinks that the first bullet went up in the air. These flattened bullets are not infrequent in military practice, but they are certainly rare amongst civilians. The bullet was of ordinary soft lead, with a slight admixture of tin. The case demonstrates that an occipital protuberance may afford some consolation to the possessors of thick skulls; it also lends colour to the story of the old nigger who fell from a great height, but fortunately pitched on his head.

[1] Transactions, vol. xxxvii., p. 570

EVELINA HOSPITAL FOR CHILDREN.

ABNORMALITY OF INTESTINE.—CYSTIC DISEASE OF THE OVARIES OF AN INFANT.

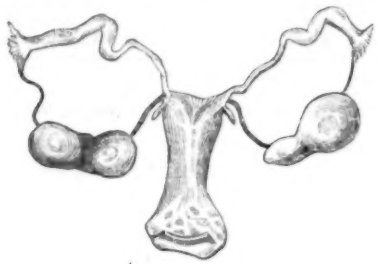
(Under the care of Dr. TIRARD.)

THESE cases are chiefly of interest from a pathological point of view. The abnormality in the first was not of such a nature as to interfere with the proper performance of the function of the bowels during life, and therefore its existence was unsuspected until the post-mortem examination. The second case is an example of a somewhat rare condition in the infant, that of cystic disease of the ovary. There are records of this degeneration of the ovary in children of twenty months, three years, &c., in which it was sometimes necessary to operate, and it is possible that the post-mortem records of our children's hospitals would show the disease to be more common than it is supposed to be. For the notes of the cases we are indebted to Mr. Arthur H. Cheatle, junior medical resident officer and registrar to the hospital.

CASE 1.—W. C——, aged three years and five months, was admitted into the Evelina Hospital with cardiac disease, which caused his death. At the post-mortem examination, on opening the abdomen, the vermiform appendix was observed to be lying immediately below the right lobe of the liver in the position normally occupied by the gall-bladder. On separating the coils of small intestine from the liver the ileum was found running into the cæcum, which was attached by a distinct omentum to the edges of the fissure for the gall-bladder, the bladder itself lying between the two layers; from the cæcum the large intestine ran in an oblique direction to the left iliac fossa, where it made a sharp bend to the right, and passed behind the coils of small intestine to the right iliac fossa, from which point, after making a gentle curve, it descended on the right side of the pelvis to the anus. A congenital constric-

tion of the pulmonary orifice was also found, together with the ordinary signs of mitral disease.

CASE 2.—The accompanying sketch was taken from a specimen removed from an infant brought in dead to the



hospital, the death being due to bronchitis. The right ovary was represented by two cysts, which were perfectly translucent, and separated from one another by a distinct partition, no trace of normal ovarian tissue being present. The left was healthy for its proximal half, the distal half being occupied by a rounded and translucent cyst.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

TUBERCULAR DISEASE OF RIGHT KIDNEY; NEPHROTOMY; REMOVAL OF RIGHT KIDNEY; ANURIA; URÆMIC CONVULSIONS; DEATH; ATROPHY OF LEFT KIDNEY.

(Under the care of Mr. PAUL SWAIN.)

IT is only right as a guide and warning to others that unsuccessful cases should be published. This was a case in which it was thought possible that a renal calculus might be present, as the renal symptoms were entirely right sided. It was therefore thought advisable to explore the right kidney. This exploration was unfortunately followed by rapid enlargement of the kidney and aggravation of all the symptoms. In addition, there was such rapid emaciation and loss of strength that it was evident, unless something was done, the man would die of septic absorption from his suppurating kidney. The rapid enlargement was attributed to inflammation and formation of pus in the kidney. That the enlargement noticed at the first operation was due to compensatory hypertrophy did not occur to anyone, as there was nothing to cause suspicion that the left kidney was destroyed by disease. In fact, it was not until the anuria had lasted twenty-four hours that it occurred to the operator that the working kidney had been removed. The association of chronic cystitis with dilatation of the ureters, atrophy of the left kidney, and hypertrophy of the right is rather difficult of explanation. The chief difficulty is to decide the sequence of events. Perhaps the following explanation may suffice. First there was cystitis, which caused thickening of the bladder and frequency of micturition, which two elements caused the dilatation of the ureters. Following this came suppuration in the left kidney, leading to atrophy of its substance and compensatory hypertrophy of the right kidney, in which tubercular disease ultimately supervened. In this case, as so often happens where the working kidney is removed, the patient remained conscious to the end. The convulsions which occurred were very slight, the most distressing symptoms being the incessant hiccough and vomiting. For the notes of the case we are indebted to Mr. W. Gifford Nash, late house surgeon.

W. S——, aged thirty-five, a police constable, was admitted on June 9th, 1891, supposed to be suffering from renal calculus. His symptoms were aching pain in the right loin radiating to the groin and testis, worse after walking about, and frequency of passing urine by day and night, followed by pain along the urethra. He stated that for two years and a half he had micturated about every twenty or thirty minutes by day and night. He had had pains in both loins, but chiefly the right. Two years ago he had a severe attack of pain on the right side and passed blood, and since then he has done so four or five times. Large clots have been passed, and much slimy sediment. There was never any definite attack of renal colic. He had gone down in weight from 180 lb. to 150 lb., but was able to follow his work as a constable until a week before admission. He had served four years in India, and passed through the Egyptian War. There was no known family history of tubercular disease.

On admission the patient was a large-framed man, fairly well nourished, but rather anæmic. The kidneys could not be felt, but there was decided tenderness in the position of the right kidney. The testes were normal. The bladder was sounded, and was decidedly tender. The urine contained one-twelfth of albumen due to the presence of pus. The heart and lungs were healthy. The evening temperature was about 101° F. each night.

On June 12th, under chloroform, the right kidney was explored from the loin. It appeared enlarged, and its surface mottled. It was punctured in four or five places, and its pelvis and calyces explored through an incision in the cortex. Nothing was found. A drainage-tube was inserted down to the kidney, and the wound in the loin sutured. After the operation the amount of urine passed was much increased, the daily average being seventy-three ounces, and on June 25th and 26th it was 122 and 101 ounces respectively. The quantity of pus varied from one-twelfth to one-thirtieth. On June 26th there was noticed a great increase in the size of the right kidney, and on the 29th urine began to flow from the lumbar wound, which was not healing well. The temperature was getting higher, and the man rapidly lost flesh and strength, besides suffering more pain in the loin. It was thought that the kidney was becoming disorganised, and had better be removed. There was nothing to lead anyone to think that the left kidney was absent. On July 3rd the right kidney was removed, and with it a large mass of condensed and hard perinephritic fat. The kidney removed weighed thirteen ounces, and the fatty capsule six ounces. The nephrotomy wound entering the pelvis of the kidney was not healed. The cortex of the kidney contained numerous small suppurating foci, and at one spot an abscess cavity the size of a filbert, which had burst into a calyx, the lining of which was ragged and ulcerated. The lining of the pelvis was rough and thickened. The kidney tissue generally was pale and tough, but at several spots were infarctions of recent date.

July 4th.—In twenty-four hours following the operation four ounces and a half of fluid were passed, consisting almost entirely of blood and pus. Temperature subnormal; pulse 70; respiration 22.

5th.—During the last twenty-four hours the patient has been frequently sick, and has passed five ounces of bloody fluid. He has no headache or pain, and is quite wakeful. At 3 P.M., forty-nine hours after the operation, slight general convulsions occurred.

6th.—At 3 and 4 A.M. again was convulsed. He has passed seven ounces and a half of fluid, which is clearer and contains one-third of albumen and one-fifth of pus. Pulse 84. Tongue red and dry. Sickness continues.

7th.—He has passed three ounces and three-quarters of urine. There are constant hiccough and vomiting. He remained conscious until death at 7.30 A.M. In eighty-nine hours and a half after removal of his working kidney he passed twenty ounces and three-quarters of blood-stained urine.

Post-mortem examination.—The bladder, ureters, and left kidney were removed *en masse*. The left kidney was about the size of a testis weighing half an ounce. Its upper half consisted of a cavity filled with white pultaceous material, and the lower half appeared fairly healthy. The left ureter was dilated to the size of an index finger throughout its whole length. The right ureter was rather smaller. The vesical orifices of both ureters were pervious. The bladder was contracted, very much thickened, and rugose. There was no urethral stricture.

HOSPITAL SATURDAY AT BIRMINGHAM.—The total subscriptions this year amount, so far, to £10,812, as against £9862 up to the same date in 1891. Exceptional interest is attached to the collection this year, having regard to the new convalescent establishment at Tyn-y-Coed in connexion with the Hospital Saturday Fund. It was estimated that £12,000 would be needed, but it will be seen by the figures given that a considerable sum will be required in order to reach the desired amount.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Enterectomy.—Spontaneous Cure of Aneurysms of Femoral Artery.—Non-tubercular Hæmoptysis in association with Renal Cirrhosis.—Tubercular Disease of Breast and Axillary Glands.

AN ordinary meeting of this Society was held on May 13th, Dr. Charlton Bastian, Vice-President, in the chair.

Mr. F. PAUL gave the particulars of a case of Enterectomy. In this instance he had put into practice an operation devised for uniting intestine, and published by him in THE LANCET for May, 1891. The patient was a woman aged thirty-seven, in whom a strangulated hernia had gone unrelieved for at least six days. The bowel was sloughing, and had to be excised. It was reunited in the following manner:—A bone tube armed with a traction thread was sewn into the upper end. The traction thread was passed through the wall of the lower end about three inches down, and the two cut ends were lightly attached to each other. Then while an assistant held the traction thread, the operator invaginated the bowel over the tube so as to completely cover the cut. It was retained in this position with four Lembert sutures, and the traction thread was drawn tight and cut off short. The patient was fed freely with fluid nourishment from the first. Solid food was commenced in the form of bread and milk on the sixth day, and meat on the fourteenth day. On the eighth day the bowels were well moved by glycerine enema, and subsequently at intervals of a few days. The pulse and temperature remained practically normal, and there were no symptoms worth recording. In three weeks she was allowed up, and at the end of the month left the hospital quite convalescent. At the present time she was quite well, and the bowels in every way natural.—Mr. HOWARD MARSH observed that the procedure was a remarkably simple one, and might be taken up by any intelligent surgeon at once and easily carried out.—Mr. BOWREMAN JESSETT remarked that it was often a very difficult proceeding to effect invagination in dogs. He thought that puncture of the lower segment of the bowel might, at any rate in certain cases, prove a source of danger. In his opinion all invagination operations were difficult and even impossible when there was much distension of the bowel above the stricture. He had himself employed the operation of lateral approximation, and invariably with a good result. Referring to Mr. Robinson's operation, he observed that the use of a rubber tube in the distal portion of the gut was not unlikely to lead to subsequent complications; as compared with the bone tubes suggested by the author, the rubber had the disadvantage of not being capable of absorption. While the author's procedure certainly constituted a step in advance in intestinal surgery, he did not think they could flatter themselves that they had attained perfection. Passing on to consider the question of which was the best suture to employ, he said he had observed that in certain cases Lembert's suture showed a tendency to tear—a contingency which could be effectually provided against by employing a "quilled" suture, which gave a firm grip on the tissues. The stomach should always be washed out as a preliminary proceeding.—Mr. PAUL, in reply, agreed that the experimental operation presented some difficulty in dogs, on account of the greater thickness of the muscular coat of the intestines of that animal; but the muscular resistance could be overcome by sustained pressure. He could not believe that the minute puncture of an ordinary sewing needle with its thread could ever be productive of harm; in any event, he had never seen any harm result from it. In reference to Mr. Jessett's suggestion as to the advantages of lateral approximation, he observed that their experience of this procedure in Liverpool in gastro-enterostomy had been unfavourable in that the aperture showed an insurmountable tendency to subsequent closure. He was not disposed to deny that Robinson's operation might ultimately prove to be the easiest. He himself had made some attempts in the same direction, but had been deterred from further attempts on finding that the manipulation of the intestinal walls led to gangrene.

Mr. HOWARD MARSH related a case of Spontaneous Cure of an Aneurysm of the Femoral Artery, apparently by inflammatory action. The patient was a street paviour, aged forty-three, and was admitted into St. Bartholomew's Hospital, under the care of Sir William Savory, on March 20th, 1891, with a well-marked aneurysm of the femoral artery, of the size of a small orange, in Hunter's canal, attended with œdema of the leg and considerable pain. The skin over the tumour was somewhat suffused and hot, the cutaneous veins were distended, and the surface was tender. The patient's temperature was 100·2°. On the following day, while the patient was lying in bed with the limb slightly raised and at rest, pulsation diminished, and in eight or ten hours entirely ceased, and the tumour, except at its central part, became firm and hard. From this time the swelling gradually diminished in size, and the patient was discharged on June 12th. On Sept. 1st he was readmitted with a second and smaller aneurysm of the femoral, immediately above the former one—i.e., in the upper part of Hunter's canal. He was placed in bed, and next day the aneurysm also was found free from pulsation and apparently solid. The tumour slowly disappeared.

Dr. FRANCIS HAWKINS gave the particulars of a case of Non-tubercular Hæmoptysis of Fourteen Months' Duration occurring in association with Cirrhosis of the Kidneys. The patient was a man aged forty-two, a carriage painter, who complained of "spitting blood" at intervals for twelve months. The patient had been treated for tuberculosis before coming under observation. Hæmoptysis was sudden in its onset; the blood was frothy and light in colour, and about one pint in quantity. The patient had never been ill previously. He was a well-built man, with pale skin and sallow tinge. The heart was much hypertrophied, and there was general arterio-sclerosis. At the post-mortem examination both kidneys were very small, capsule adherent, and the kidney contained small cysts. The left lung at its base presented the appearance of carnified lung; at the apex it was emphysematous and œdematous. The right lung was emphysematous, congested, and œdematous. Attention was drawn to the fact that hæmoptysis might occur as a symptom in renal disease, and that a hypertrophied heart might produce physical signs in the left lung which might be mistaken as evidence of tuberculosis.—Dr. HADDEN inquired whether at the post-mortem examination any traces of previous hæmorrhages had been found in the lungs, and whether any sanguineous extravasations had been found in any other organs of the body. Hæmorrhagic extravasation confined to the lungs was, he thought, rare in chronic renal disease.—Dr. BENHAM did not think it had been clearly shown that the hæmorrhage actually came from the lungs. The author, indeed, had mentioned that the blood came away on several occasions without any effort of cough. He mentioned that in one case of supposed hæmoptysis in his own practice he had found on examining the mouth that on the site of a tooth stump there was a small pulsating vessel which was evidently the source of the hæmorrhage, though this had lasted for several weeks. He asked why the author had not used turpentine instead of ergot; the former he regarded as the more valuable hæmostatic in such cases.—Dr. BASTIAN suggested that the hæmorrhage might possibly have been due to rupture of varicose veins in the respiratory tract—a condition of things which would be very likely to escape observation at the necropsy. This condition was probably the source of unexplained hæmorrhages from the stomach in cases in which the symptoms did not authorise the supposition of ulcer.—Dr. CHAPMAN mentioned a case in which the passage of a small shot into the bronchi had determined paroxysmal hæmoptysis; which only ceased, and the cause of which was only ascertained, on the shot being expectorated.—Dr. LONGHURST asked whether there was any history of syphilis. He thought that the hæmoptysis might have been due to a gumma of the lung. This was suggested by the excellent effects obtained by the administration of iodide of potassium.—Dr. HAWKINS, in reply, said that every possible source of hæmorrhage had been eliminated by a careful search. There was no history or obvious indication of syphilis.

Mr. ARBUTHNOT LANE read a paper on Two Cases of Tubercular Disease of the Breast and Axillary Glands. He alluded to the frequency of chronic mammary abscess in women, giving strong tubercular histories or exhibiting this disease in other organs, and considered that, though these were usually unassociated with tubercular disease of the

axillary glands, they were nevertheless tubercular. The first case was that of an unmarried woman aged thirty-eight, who had had to her knowledge a tumour in the breast for eighteen months, which had recently been associated with a swelling in the axilla. She had no evidence of tubercle elsewhere, nor was there any history of tubercle in her family. She recovered after the breast and a large number of caseous glands had been removed, and she had no recurrence of the growth, locally or elsewhere. The second case was that of a married woman aged thirty-four, who gave a strong tubercular family history. During lactation an abscess developed in her breast, burst, and discharged at intervals. An abscess developed later in the axilla. She was seen by Mr. Lane four years after the development of the abscess, when the breast was found to be riddled with sinuses, and the axilla filled up with caseous and suppurating glands. These were removed with great difficulty. Except for some induration in the apex of the axilla, the patient recovered completely. She had no evidence of tubercle elsewhere.

PATHOLOGICAL SOCIETY OF LONDON.

Mammary Tumour.—Indigo in Urine.—Lesions of Pyramidal Cells in the Cerebral Cortex in Chorea.—Sarcoma of Thigh.—Malignant Orbital Growth.—Hereditary Sarcoma of Eyeball.—Congenital Heart Disease.—Congenital Cyst beneath Tongue.

AN ordinary meeting of this Society was held on MAY 17th, the President, Sir George Humphry, in the chair.

Mr. C. B. LOCKWOOD showed a tumour of the breast which had the characters of a malignant duct papilloma, or, as it is more commonly called, duct cancer. It had been removed by Mr. Willett from an unmarried woman aged thirty-nine, and the history was typical of that affection. The disease began, eighteen months before removal, with pain, which became persistent. The left breast then seemed harder than the right, and there was a discharge of blood from the nipple—small at first, then gradually increased until a teaspoonful was lost in the twenty-four hours. Physical examination showed that the left breast was larger than the right, and hard and nodular. Above the outer side of the areola there was a harder mass, and when this was pressed blood exuded from the nipple. There was also a slightly enlarged gland low down in the axilla. The mammary gland and two of the axillary glands were removed by operation, and the patient made a safe and rapid recovery. When examined with the naked eye the diseased structures had not the usual appearance of carcinoma. The masses in the substance of the mamma seemed more like inflammatory indurations. Throughout the gland, however, a number of small apertures could be seen, and were judged to be the mouths of enlarged and patulous ducts. This was borne out by the histological examination, which not only showed that the lumens of the ducts were enlarged, but that epithelial papillæ projected into them. Such appearances as these would not have constituted a cancer; but, in addition, the epithelial lining of the ducts had in numerous places proliferated and invaded the connective tissue of the breast, which was increased in quantity. The lymphatic glands which had been removed from the axilla seemed to contain no trace of cancer. In conclusion, Mr. Lockwood said he ventured to show the specimen, as it illustrated an unusually early stage of an interesting disease.—Mr. RAYMOND JOHNSON doubted if the specimen was of a carcinomatous nature, and considered that it was more probably proliferated epithelium into the cysts of a degenerated mamma. Three pathological processes could produce the conditions seen in the sections: (1) simple intra-cystic papilloma; (2) cystic carcinoma; and (3) duct papilloma. He then referred to a card specimen shown to the meeting by Mr. Bland Sutton. The appearances seen in Mr. Lockwood's sections might possibly indicate a condition of mamma antecedent to rather than actual carcinoma.—Professor HAMILTON of Aberdeen asked if this case was not really an instance of combination of papilloma with cancer. He had recently met with such a case, in which in one part of the breast there was typical scirrhous cancer, and in another part cysts containing papillary growths. Such a combination of growths was most unusual.—Mr. BLAND SUTTON said that his specimen showed a mass of papillomatous growth projecting into a cyst lined with epithelium. These projecting processes were essentially of warty character. There was no interstitial growth in the stroma of the breast.—Mr. LOCKWOOD, in reply, could not entirely agree with Mr. Johnson's explanation of the pathology of this case, for there was presence of epithelium in the interstitial parts of the tumour. He would be glad to refer it for report to the Morbid Growths Committee.

Dr. ORD exhibited a drawing showing indigo deposited naturally in the urine of a patient who had suffered for ten years with symptoms indicating enlargement of the prostate. The urine was alkaline and offensive, and contained a number of flaky masses, which, under the microscope, were found to be altered mucus, containing, embedded in them, a large number of dark-blue bodies, apparently composed of some crystalline material, partly stained by indigo, partly having indigo deposited on them. These Dr. Ord considered to be either urate or phosphate. He knew of no artificial method whereby indican present in alkaline urine might be decomposed so as to form indigo blue without inducing an acid reaction. It appeared to him that the form of the indigo was determined by the form of the substance upon which it had been deposited. He described the ordinary method of obtaining indigo from urine either in the form of a solution in chloroform, or in a film deposited on the surface of the fluid, of which he showed the microscopic appearances. If a solution of uric acid were added to the urine before performing the test, crystals of uric acid, partly stained and partly encrusted by indigo, were found at the bottom of the fluid. Epithelial cells, yeast cells, and rod-shaped bodies resembling bacteria were also found similarly stained, and coloured drawings illustrating these were shown. Occasionally hedgehog crystals of presumably uric acid were found deeply coloured. It appeared to Dr. Ord that the use of nascent indigo might possibly be of use in the staining of bacteria.—Dr. WHEATON asked if these bacteria had not the power to produce indigo. It would be desirable to cultivate them and introduce them into suitable urine to see if indigo were not produced. He had seen indigo deposited upon uric acid crystals as a result of urinary decomposition.—Professor CROOKSHANK asked if any attempt had been made to isolate and cultivate these peculiar micro-organisms.—Dr. ORD, in reply to a remark from Sir Richard Quain, said he had volatilised and deposited the crystals of indigo on glass. He had only observed bacteria in one or two out of many specimens of urine examined.

Dr. F. C. TURNER showed Microscopical Sections of the Brain from five cases of fatal Chorea in females from twelve to nineteen years of age—in one case complicated with puerperal septicæmia, in two others with albuminuria and heart disease. The sections, which were taken from the Rolandic region, all showed conspicuous swelling and opacity of certain of the large pyramidal cells in the deeper layers of the cortex. These were especially conspicuous in the first three sections, and a drawing of two of them was shown. The author, in explaining the grounds of his belief that the occurrence of an attack of acute chorea was dependent on the occurrence of a cerebral lesion of the kind shown, observed: 1. That the symptoms and course of chorea indicated a structural cortical lesion and not a nutritive derangement only, as, for example, in hysterical symptoms induced and removed at pleasure. 2. That such a dropsical swelling of the pyramidal cells of the cortex as a recoverable lesion accorded with the symptoms and course of an ordinary case of chorea and with its recognised etiological factors, while the vascular lesions to which the phenomena had been attributed did not accord with them, either pathologically or in their observed anatomical features. Any nutritive disturbance of the cerebrum must, if sufficiently severe and prolonged, induce capillary thromboses as well as lesions of the nerve cells. But lesions of the former extravascular and highly differentiated structures would occur much more readily than lesions of the latter, endowed with much greater vital resistance, especially in youth and in contact with the blood. In the specimens shown there was no evidence of vascular lesions associated with those of the nerve cells. 3 He had met with similar lesions of the nerve cells in cases of nutritive disturbances of the brain from other causes—e.g., cerebral plumbism, uræmia, &c.,—but never anything approaching the more conspicuous lesions shown. He therefore regarded these more marked lesions as distinctively choreic, magnified by the concurrent effect of other causes of systemic and cerebral nutritive disturbances,

and the series of specimens as evidence of the existence of a structural lesion of the brain, distinct if slight in degree, as the immediate cause of the phenomena of chorea in accordance with the inference deducible from those phenomena.—Dr. HALE WHITE thought that the grave diseases other than chorea with which these patients were afflicted would quite explain the conditions seen microscopically. In proof of the author's view, he should take a simple case of hemichorea and then compare the condition of the nerve cells on each side of the brain.—Dr. TURNER, in reply, considered the changes in the cerebral cells far too profound to be accounted for by the nutritive disturbances present. He believed that it was in structural aberrations in the cerebral cortex such as he had demonstrated that the true explanation of chorea was to be found.

Mr. J. R. LUNN showed a specimen of Sarcoma of the Thigh, which had been removed from the body of a girl aged sixteen. In November, 1883, the patient had been under the care of Mr. Watson Cheyne in the Paddington Green Children's Hospital. At that time the tumour was stated to have existed for two years, and the following note was taken: "On admission a fine elastic tumour was seen in Scarpa's triangle bounded above by Poupart's ligament. The femoral artery was pushed to the outer side. It was not adherent to the skin, and there were no enlarged glands. On making an exploratory incision, Mr. Watson Cheyne had found that it was a sarcoma of the ilium, and the attempt to remove it was given up." In March, 1888, the patient was admitted into the Marylebone Infirmary, under Mr. Lunn's care, with a fungating mass in Scarpa's triangle, the size of a cocoanut. There was well-marked pulsation on the outer side of the swelling, over which a loud bruit could be heard. A loud bruit could also be heard all over the cardiac area and over the large vessels. Pressure on the common femoral artery did not stop the pulsation in the tumour. Much blood was lost through oozing from the surface. No operation was permitted. In 1890 a portion of the growth was removed by Mr. Potter in the Kensington Parish Infirmary. No post-mortem examination was allowed. The author referred to a case which Dr. Bristowe published in THE LANCET in May, 1885. Dr. Bristowe had also seen the present case, and considered that the murmurs were due to the condition of the vessels of the tumour and of the arteries, not of the veins. There was no cardiac disease in Dr. Bristowe's case.

Mr. SILCOCK showed a specimen of Malignant Growth affecting the Orbit, Base of Skull, and Brain. The patient came to Moorfields Eye Hospital in 1882 with a smooth prominence above the left eyebrow, which had been growing for eighteen months. Six months later it had become much larger, and the patient had had fits of epileptic character. The left nostril was filled with growth, the left eye was proptosed, and there was left optic neuritis. Afterwards the growth increased and protruded from the nostril, the eyeball was destroyed, and the head was enormously enlarged. He died ten years after the commencement of the growth. Up to within a few weeks of death he understood remarks made to him, though he was unable to articulate himself. It was an epithelioma of typical character, probably beginning in one of the sinuses in connexion with the nose, and a considerable portion of the growth had undergone ossification.

Mr. SILCOCK also related an instance of Hereditary Sarcoma of the Eyeball in three generations. He showed a melanotic sarcoma of the eyeball of a woman aged twenty, who was admitted to Moorfields Eye Hospital in October, 1890. The growth sprang from the left half of the choroid coat of the left eye, and filled rather more than half the vitreous. The growth was of mixed spindle and round cells, and started in the outer part of the choroid. Her mother had been afflicted with an ocular tumour, similar in structure and site. She had become blind whilst pregnant with her sixth child, and the globe was excised after the birth of the seventh, which was the case recorded above. The mother's sister died, aged forty, of tumour of the breast, and she lost one eye before death. A twin sister lost an eye after a confinement, and her grandfather lost an eye from an inflammatory affection. This was probably an instance of hereditarily increased vulnerability of the tissues of the eyeball.

Dr HALE WHITE showed a specimen of Congenital Heart Disease taken from a boy aged fifteen, who had never had rheumatic fever, and who had been quite well till four months before admission, when, apparently following on influenza, he had become short of breath and œdematous. On admission he had all the signs of backward pressure. The cardiac dulness was increased; over the whole of the chest there could be heard a very loud, rasping, to-and-fro sound, closely simulating a pericardial rub. This was also audible behind, especially at the left apex. Its point of maximum intensity was in front, over the sternum, opposite the third interspace. At the necropsy, the heart was not particularly hypertrophied; at the upper part of the septum ventriculorum was an aperture between the two ventricles, and behind the right anterior aortic valve was a small aneurysm, which had burst into the right ventricle. Judging by the friction patches on the right ventricle, it appeared that the blood had flowed both from the left ventricle and from the aorta into the right ventricle.

Mr. STEPHEN PAGET showed a large Congenital Cyst from under the tongue of a little girl, a patient of Dr. Mitchell of Brockley. It had almost suffocated her at birth, protruding in a mass far out of the mouth. It had been repeatedly tapped during the first year of her life. It hung down nearly to the sternum, and was covered with a thick, harsh cuticle. The tongue was spread out over its upper and posterior aspect; the mucous membrane of the floor of the mouth was lifted up level with the teeth, and the lower jaw was twisted, flattened, and rotated outwards and downwards. The cyst was easily removed between two curved incisions, separating it from the tongue behind it and the lower jaw beneath it. The child did well, and could now almost close her mouth; the lower jaw was recovering its shape. There was no solid growth round the cyst, and it was not lined with epithelium. It was probably of the same nature as the "hydrocele of the neck" described by Mr. Hutchinson.

The following card specimens were shown:—

Dr. DAWTREY DREWITT: Case of Pseudo-hypertrophic Paralysis, with Unusual Enlargement of Muscles.

Mr. J. BLAND SUTTON: (1) Congenital Absence of Tibia; (2) Case of Duct Papilloma.

Dr. W. LAZARUS BARLOW: Aortic Aneurysm bursting into the Neck.

Mr. A. A. BROCKATT: Large Biliary Calculus.

Dr. W. LEE DICKINSON: Intra-pericardial Aneurysm, which set up Pericarditis.

Dr. NEWTON PITT: Deficiency of Diaphragm.

The annual meeting of the Society was then held. The Council reported a slight increase in the membership, and referred to the interest excited by the debate on phagocytosis. The usual hearty votes of thanks having been accorded to the retiring officers, the following were declared elected for the ensuing session, the only deviation from the Council's selection being the substitution of another name (Mr. Bowlby's) for that of the official candidate as surgical secretary. President: Sir George Murray Humphry, F.R.S. Vice-Presidents: Drs. James Frederic Goodhart, William Tennant Gairdner, Frederick William Pavy, Sidney Coupland, Sir Joseph Lister, Bart., F.R.S., and Messrs. Henry Hugh Clutton, William Watson Cheyne, Henry Trentham Butlin. Treasurer: Dr. William Cayley. Honorary Secretaries: Dr. Francis Charlewood Turner and Mr. A. Bowlby. Council: Drs. Theodore Dyke Ackland, F. G. Dawtrey Drewitt, Richard G. Hebb, David B Lees, Frederick Walker Mott, G. Newton Pitt, H. H. Tooth, Samuel West, German Sims Woodhead, and Messrs. William Henry Bennett, Thomas Colcott Fox, William Arbuthnot Lane, D'Arcy Power, Charles A. Ballance, W. Bruce Clarke, Edgar Crookshank, Walter Edmunds, R J. Godlee, William Hickman, and Samuel G. Shattock. Honorary Member: Professor Metchnikoff.

THE GERMAN HOSPITAL, DALSTON.—His Royal Highness the Duke of Cambridge occupied the chair at the anniversary dinner, held on the 10th inst., at the Hôtel Métropole. He was supported by his Excellency M. Akerman and many other official foreigners. His Royal Highness proposed "Prosperity to the German Hospital," and effectively urged the claims of the institution for public support. He remarked that the statistics of the patients treated during the past year showed a good record of work done. The balance sheet was on this occasion a very creditable one. A small surplus remained in hand. The year's income was £9918, and the expenditure £9300, which had enabled the treasurer to pay off a loan of £500. In the course of the evening subscriptions and donations were announced amounting to £2862.

Reviews and Notices of Books.

Elephantiasis and Allied Disorders. By JOHN MAITLAND, M.D., Surgeon-Major, Madras Medical Service. Madras: Government Press. 1891.

OWING to the prevalence of elephantiasis and other forms of filarial disease in many divisions of the Madras Presidency, the Government of Madras has wisely published this book, so that surgeons in Southern India may have their attention called to the study of these disorders, which are of special importance to those who practise in that part of the world. This small work of forty-eight pages contains an excellent account of elephantiasis and its allied diseases. The etiology, the description of the filaria sanguinis hominis, the pathology, morbid anatomy, geographical distribution, and the symptoms and diagnosis of the diseases dependent on the introduction of the filaria into the blood are most clearly and simply described. The investigations of Wucherer, Salisbury, Lewis, Bancroft, and Manson are laid under contribution in their historical sequence. Two practical points are most strongly insisted on by the author. In discussing the treatment of elephantiasis of the limbs, he absolutely condemns the operation of ligaturing the main artery, which was proposed by Carnochan in 1851, and is even now sometimes performed. He also forcibly points out the impropriety of attempting, in operating upon the scrotum, to preserve any portion of it to form a covering for the testicles, and the cases recorded by him seem to justify his opinions. The book is illustrated with nine excellent plates, and those dealing with the anatomy and the development of the filaria are especially worthy of praise. This systematic treatise brings together the various accounts of the subject that have been published since Dr. Manson's work on the "Filaria Sanguinis Hominis," and presents us with an accurate and definite picture of the disease.

Epidemics, Plagues, and Fevers; their Causes and Prevention. By the Hon. ROLLO RUSSELL. 8vo, pp. 501. London: Edward Stanford. 1892.

PROFESSEDLY written by a layman for laymen, especially those officially concerned in local health administration, and for the purpose of putting into plain language what is usually clothed in technical terminology, it would be useless to expect a perfect scientific arrangement or classification in such a work as the one before us. But surely some better arrangement of headings could be found than an alphabetical one, which leads to "measles" being sandwiched between "malaria" and "Oriental sore," and to "disinfecting" coming between "pig-keeping" and "relation of weather and season to health." Again, beginning with an account of "spreading diseases in plants and animals," in which the parasites and fungi are treated of at somewhat unequal length, the author forthwith plunges into "cholera." We may say at once that the book is nothing more than a compilation of existing knowledge, not always selected with discrimination, and often taken haphazard from opinions more or less authoritative, expressed in medical and so-called sanitary periodicals. At the same time, the industry and diligence of the author in collecting all the different facts and opinions scattered throughout the volume cannot but be commended. Under the heading of Cholera, the memoranda and conclusions of the Vienna, Brussels, and Rome Conferences are conveniently set out, and Indian experience freely quoted. There is a considerable chapter headed Consumption, and much useful information concerning the tubercle bacillus and disinfection of sputa. In this chapter much is said regarding "colds," but the author goes somewhat beyond his *métier* in vaunting the use of ammonia and eucalyptus as antidotes in the first stage of a cold. Under Diarrhœa, account is given of Ballard's researches and of the Leicester and Hull experiences.

The Diphtheria chapter is very full, and contains accounts of Power's and Klein's researches into the connexion of this disease with milk, as well as reference to its association with disease of the lower animals. American experience is quoted at great length; but the close relationship of diphtheria to school attendance does not receive the attention it deserves. With regard to influenza, Mr. Russell appears to have abandoned his theory as to its recent causation by the Chinese floods, and lays greater stress upon the conditions (telluric and human) existing at Bokhara during the feast of Radaman, and before the appearance of the disease in Russia in 1889. He quotes freely from Dr. Parsons' Report, and agrees in his view as to the spread of influenza being personal and not atmospheric. A large body of Indian experience is brought forward concerning Malaria.

The influence of schools in spreading measles is acknowledged, and the author seems to incline in favour of compulsory notification of that disease. Ballard's and Klein's researches into Epidemic Pneumonia receive due prominence. The invaluable service of muzzling in repressing rabies is acknowledged. Mr. Russell gives an account of Power's and Klein's researches into the "Hendon disease," and recognises the need of improved farm-yards and of means of detection of animal disease. We are glad to find him sound upon the subject of Vaccination; but when he says that the average duration of immunity conferred by vaccination is ten years, he evidently intends to refer to primary vaccination only; and, after commending the fulness and preciseness of the Government instructions concerning vaccination, he should not fall into the error of requiring a standard area of one square inch, when the Government is satisfied with half that size. He quotes with commendation Power's researches as to the aerial diffusion of small-pox, and is advanced enough to advise the burning of all infected air from small-pox hospitals. He emphasises the frequent association of enteric fever with milk-supplies, and draws attention again to the necessity of an improved condition of farmsteads. On the other hand, the author's reference to typhus fever is very meagre, and not up to date. Some statistics of its marvellous decline in recent years ought to have been given. The lack of proportion in treating the different subjects, which is perceptible throughout the book, is shown in the short chapter on Whooping-cough, and the inordinately long one on Yellow Fever, though the former is of far greater interest to English readers. Mr. Russell has much to say on the subjects of Susceptibility and "Immunity," not always very clearly expressed. The references to hospitals, disinfecting and quarantine, are all meagre in the extreme, and on the latter subject he affords no information as to international questions, which are of such supreme importance. Sanitary science is somewhat too abruptly summed up in the two principles of cleanliness and isolation; though as to the necessity of unity of administration, and of its corollary, a central health office, with powers similar to those of the infant Board of Agriculture, we cannot but cordially agree with him.

If the author could see fit in a new edition to arrange the subject-matter differently, and to exercise a little more judgment and discrimination with respect to the mass of quotations which form his book, we do not see why it should not become a useful work of lay reference on the subjects with which it professes to deal.

Pauperism and the Endowment of Old Age. By CHAS. BOOTH.

THE important questions discussed in Mr. Charles Booth's book upon Pauperism and the Endowment of Old Age are now sufficiently before the public to become matters of general and of animated discussion, although it must be confessed that the materials for debate are somewhat meagre and hard to discover. It is one of the conspicuous merits of a book like this that it conveys to the public mind a sense of the nature and shortcomings of the available information, and tends thereby to direct discussion along the lines that may be usefully followed. This is eminently true of the statistical material which is here treated. The great difficulty of assigning the mass of pauperism to its true causes has rarely been publicly demonstrated. The very greatness of the difficulty has a tendency to conceal it from public observation, for it has resulted in the production of official statistics of so vague and indefinite a character that the reader is easily led to suppose that nothing of interest or importance can be extracted from them, saving only the broad results which lie absolutely upon the surface. Yet, in fact, a better system would yield matter not only of the most striking significance so far as the poorest classes are themselves concerned, but also for all ranks of society, for much that is manifestly true of the pauper class is equally true, and only less manifest, of the classes above them in the social scale. For example, the causes of pauperism can be investigated with comparative ease, and it can be shown to what extent old age, disease, and vicious habits are severally responsible for destitution. As regards that class which lives upon the verge of pauperism a very small impoverishment brings them under the notice of the guardians; whereas those who enjoy a reserve of means do not reach this same level—a condition eminently favourable for observation,—unless and until the reserve is exhausted. But although less easy to observe, these mischievous forces are equally at work in the other strata of society. Sickness and drink do not put the less strain upon the resources of society because the strain is met and borne by private reserves. For example, if we take the figures which Mr. Booth has extracted from the Stepney records, we find that vicious habits, such as drink, laziness, and the like, count as principal causes of misfortune in 18 per cent. of the cases examined, sickness in something over 26 per cent., and old age in upwards of 32 per cent. To some extent these figures are, of course, characteristic of the people whose condition they portray, and to that extent they cannot be properly applied to another case. But it is nevertheless true that the parallelism is a matter of much greater importance than the disparity. The influences which cast the pauper into a state of destitution cause impoverisment, though not destitution, to his neighbours who are more well-to-do. But they are not equally mischievous. For example, old age is not a calamity to those who have the means during their prime of providing against its necessities. So, again, with sickness and with vicious habits these are probably besetments of the pauper class in a very unusual degree, but even if all possible allowance be made for such considerations we have here a most striking picture of the extent to which misfortune attends upon more or less preventible causes, and the vast field which invites the labour of the moralist and the physician.

As to the main drift of the book, we are by no means clear that Mr. Booth has made out his case. The provision of old age pensions for all old people is a measure of such vast financial proportions that it should not be seriously discussed until all reasonable alternatives have been considered. This is a view of the matter which goes much beyond the compass of the book, and it has therefore very naturally been left untreated, with the result that Mr. Booth has made nothing clear except the scheme which he favours. That is something, but it leaves even more to be desired.

OUR LIBRARY TABLE.

Religio Medici, and other Essays. By Sir THOMAS BROWNE. Edited, with an Introduction, by D. LLOYD ROBERTS, M.D., F.R.C.P. London: David Stott. 1892.—This exquisitely printed edition of an English classic is well worthy of its place in the dainty series to which it belongs. The enterprise of the publisher has been ably seconded by the skill and zeal of the editor, Dr. Lloyd Roberts, who, in a scholarly and finely sympathetic introduction, tells all that we require to know of the physician and philosopher who wrote the "Religio Medici," and the "Vulgar Errours." The book is one for which space could be found in the most restricted travelling-bag, and should, in fact, be the constant companion of the professional man on his holiday. It is almost as soothing to the troubled spirit as the "De Imitatione," while it stimulates thought and speculation in directions supposed to be but newly broken up by the medical pioneer. Take the beautiful essay on "Hydriotaphia or Urn Burial," for example. There we find an anticipation of the quite recent movement in favour of the reduction of the dead body to ashes, which, as Dr. Lloyd Roberts quaintly remarks, has "become a burning question in more senses than one." The most thorough-going advocate of cremation has nothing to teach Sir Thomas Browne; but, on the contrary, has much to learn from him in the solid erudition and calm ratiocination with which the whole question is considered and argued out. And all this is quite independent of the consummate merits of his style, reminding us, as few British classics can be said to do, that "the writing of English is one of the fine arts." As De Quincey asks: "When shall one hope to find music so Miltonic, an intonation of such solemn chords as are struck in the opening bar of a passage in 'Urn Burial'? What a melodious ascent, as of a prelude to some impassioned requiem breathing from the pomps of earth and from the sanctities of the grave!" But we need not dilate on the charms of one of the recognised "Dii majorum gentium" of English literature. Rather let us refer to the care with which the book has been presented to the reader, and to the general accuracy with which the frequent citations from the classics have been given. Now and again we meet with a misprint: "compana," for instance, instead of "campana"; "securisima" for "securissima." But these are rare; and does not Sir Thomas Browne himself admonish us that while "capital truths are to be narrowly eyed, collateral lapses and circumstantial deliveries are not to be too strictly sifted"? The volume is appropriately dedicated to a life-long admirer of the "Religio Medici," Sir Andrew Clark.

Analysis of Theology, Natural and Revealed. An Essay, contrasting the Pretensions of Religion and Atheism to Scientific Truth. By EDWARD GARLAND FIGG, M.D. London and Edinburgh: Williams and Norgate.—In this book we have a volume of exposition—copious, extensive, ingenious, and not wanting in erudition—of the author's theological views, which are not exactly orthodox in the ordinary sense, and on their relation to the latest findings of scientific observation. Its principal fault is an illogical and unscientific tendency to assumption. Due care is taken to expose, if possible, any gaps which may disfigure the solid highway of modern discovery; but there is no adequate sense of impropriety when the conclusions advocated by the author are reached after something of a scramble over defective premisses. The main argument contained in this work maintains the existence, apart from any material embodiment, of a spirit nature or spirit essence, which commonly operates in association with various forms

of matter, with physical forces—such as light &c.; and, finally, with what are called vital essences belonging to the animal and vegetable kingdoms, and having their representative head in Deity. The derivation of the spirit essence is unknown, but its manifestations—which afford clear evidences of design—are noticable in every department of natural action. The chapters on the Adamic fall, regarded here as allegorically expressive of a state of spirit-purity original in nature but invaded by error and attendant evils, on the light shed by nature and instinct on the relations of God and man, and on the resurrection—that is, the resumption of its fittest bodily surroundings by a particular spirit nature,—may be noted as more especially noteworthy. The view brought forward respecting the antiquity of the world is no less ingenious than it is in the highest degree conjectural. It implies the periodic destruction and reconstruction of the earth, with a corresponding change of orbit and all other conditions. On the whole, the work might be described as a species of romance in logic, not devoid of interest, but marred by a disregard for the teaching of material facts, which may be spiritual, but is not, to our mind, convincing. The form of expression chosen, that of a dialogue, becomes tedious after a time. Now and then we meet with serious orthographic errors. Thus for "psychical" we have "psycical," "Delphos" for "Delphi," "crysalis" for "chrysalis," &c. The discussion is heavy from the mere abundance of language, though relieved somewhat by numerous illustrative references.

A Junior Course of Practical Zoology. By A. MILNES MARSHALL, M.D., and C. HERBERT HURST, Ph.D. Third Edition. London: Smith, Elder, and Co. 1892.—We have had occasion already to recommend this book as an excellent laboratory text-book. The appearance of a third edition in the course of a few years shows the estimation in which it is held. The authors have increased the text by about twenty pages, and have added a few new woodcuts, the chief of which are those showing the arterial and the nervous systems of scyllium canicula, and those illustrating the nervous system of the rabbit. It is one of the best of the many zoological manuals that are now accessible to the student.

Plumbing Practice. By J. WRIGHT CLARKE, Instructor in Practical Plumbing at the Polytechnic, London. London: *Engineering and Building Record* Office. 1891.—This is a practical and not a theoretical work. It is meant for the education of plumbers, but it will be useful to all whose business it is to see that plumbing is properly done—in other words, to all who are anxious about their drains. The work commences with a simple description of the principal metals used in plumbing, and their alloys, how they are obtained, how manufactured, and how utilised. The book is full of practical hints. For instance, it points out that lead pipes are often bruised by the mere transit from the place of manufacture to the place where they are to be used. Then the half- or three-quarter-inch lead pipe is sometimes bent on the spot. Such bending contracts the water-way. It is essential that the barrel of the pipe should be smooth and even throughout. If there be any difference, the pipe should be larger and not smaller at the bend. Needless to say, the art of bending pipes, forming elbows and syphons, is a fundamental question, and when not properly done causes deposits which ferment and become dangerous to health. After seeing that the pipes are perfectly round and properly bent, the joints should be inspected, and three chapters are devoted to this phase of the subject. Pipes, even when properly made, get out of shape through being suspended on hooks from walls. The subject of lining and laying sinks and cisterns is next considered, and then we approach the more familiar questions of sewers, drains, closets, sinks, ventilation of soil pipes, baths, slop-water, &c. Though these appertain to plumbing, they are subjects dealt with in every book on sanitation. Mr. Clarke gives us new instances of syphonage and many illustrations to show how traps fail to act and how their seal is destroyed by the clumsy manner in which they are adjusted. We find also a good deal of information about hot-water pipes and circulating boilers. An excellent index at the end of the volume enables the reader to refer easily to every point raised in the book. If such works were more generally studied and the lessons they teach remembered at the moment of hiring or purchasing a house, the jerry builder would fall upon hard times.

House Drainage: a Handbook for Architects and Building Inspectors. By G. A. T. MIDDLETON, Associate of the Royal Institute of British Architects, and Member of the Society of Architects, &c. London: R. T. Batsford. 1892.—This is a satisfactory book of its kind. It has the advantage of being a small book; but it sets forth in a clear and concise way the principles of the subject, and illustrates and describes the best modern appliances and methods of carrying out such principles. It is illustrated by nineteen plates and diagrams, and the text is arranged in eight chapters, embracing such subjects as are practical and useful, and about which information is most necessary.

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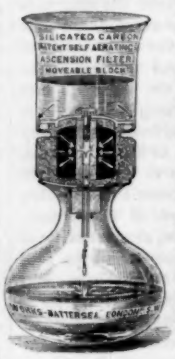
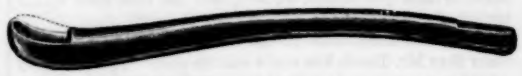
THE Silicated Carbon Filter Company, of Church-road, Battersea, have sent us a sample of their improved silicated carbon table filter, in which the main novelty consists in the adoption of an arrangement by which the air under the aerator cover is forced, by the weight of the water in the upper vessel, through the filtering medium itself. Thus the impregnation of the water with air is to a certain extent secured. As we have frequently urged, aeration is just as important a factor in the purification of water as is efficient filtration, and we are glad to find that makers of filters have of late given their attention to this very important point.



NEW SUPPOSITORY INTRODUCER.

THIS instrument is very simple in construction, being merely a solid vulcanite bar conveniently curved, and having a spoon-shaped recess at the apex just large enough to receive and hold firmly an ordinary suppository. Thus charged, it serves not only to introduce, but to maintain the



suppository in contact with the surface it is desired to affect during solution, and afterwards of absorption or continued application, as may be desired. The instrument has been made for me by Messrs. John Richardson and Co., Leicester, Limited, and answers perfectly.

Mountsorrel, April, 1892. W. PAULSON, L.R.C.P. &c.

THE LANCET.

LONDON: SATURDAY, MAY 21, 1892.

THE May meeting of the Medical Council will be inaugurated on Tuesday next, at two o'clock, with the President's address. In the absence of the official programme it is not easy to forecast the exact nature of the discussions; but the general drift of them may be surmised. There will be some noticeable differences in the *personnel* of the Council. One of them will be caused by the retirement of Professor STRUTHERS, and in his place Dr. ANGUS FRASER will represent the University of Aberdeen for the next five years. Dr. STRUTHERS will be much missed. He was not always in debate a master of the art of making his opposition pleasant. But he did much hard and valuable work in the Council, especially as chairman of the Education Committee, and he spoke with the authority of a large experience and a rare enthusiasm as an anatomical teacher. The University of Durham, in consequence of the death of Dr. GEORGE HEATH, will now be represented by Dr. PHILIPSON of Newcastle-on-Tyne. The newly elected Direct Representatives, having previously served in this capacity, should bring to the Council the advantage of some acquaintance with its methods and a large knowledge of the views of the profession. It is customary to regard the May meeting of the Council as set apart more especially for the discussion of questions of medical education. And in the light of the great extension of time that has been given to the medical curriculum and the great additional opportunities which such an extension affords to medical teachers, it is reasonable to think that some discussion will be devoted to securing that this extension shall be put to the best uses. But the Council will not have at its approaching meeting the full materials at its disposal to permit of exhaustive treatment of the subject. The term of five years only now becomes obligatory. It applies to those alone who commenced their medical studies after Jan. 1st, 1892. In the first instance it is the duty of the medical authorities to say how this additional year is to be used. They are understood to be diligently considering this question. They have been requested by the Medical Council to forward to the registrar, at the end of the year 1892, a copy of their regulations, in the form in which they then stand, and under which they confer qualifications in medicine, surgery, and midwifery. The Council, and especially its Education Committee, are responsible for this eventful change in the conditions of medical education, and it is to be hoped that the coming meeting will give evidence that the Council is alive to its responsibility on this subject and is resolved to make its influence felt. It is easy enough for the Council to toss a great resolution like this to the bodies to be worried by them, as dogs worry a bone, all fighting for their own interests, and all alike ready to add to the existing agonies of medical education and examination; but the Council is expected to follow up its resolutions and to see that the spirit and purpose of them are fulfilled. This important addition to the burdens of the student and his parents arose out of proved defects in practical education inseparable from a too theoretical way of teaching. The Council itself has clearly indicated that the additional teaching that is to be imposed shall be clinical and practical in its character. It will doubtless ascertain by its inspection and its inquiries how far this essential object is being secured. There is one thing almost more important in regard to which we may hope, at the approaching meeting, to receive some light. Last year the Secretary for War took the Council into consultation on the defects of preliminary education shown in candidates for the medical service of the army. The Council passed a resolution asking the bodies to take note of instances of candidates in whose examinations evidence of gross defect in general education occurred, and of the bodies by which such candidates had been passed in preliminary subjects, and to report to the registrar of the Council. We shall see if any light is thrown by this means on a subject which deeply affects the character and standing of the medical profession. It is lamentable to see the failures of some students in their after career. It would be true kindness to reveal their unfitness to them at the preliminary stage of their course. Other questions affecting the bodies, or interesting to the profession, but of a more or less general character, are likely to arise. The Council, when discussing this question of preliminary education, expressed regret and disapproval of the medical examining bodies continuing, as in the case of the Society of Apothecaries, to examine in general education. We may hear whether such bodies are prepared to abandon this part of their work. But we shall be better prepared to judge them when we know what bodies pass men whose spelling is so faulty that the War Office makes it a ground for inquiry. It may turn out that general educational bodies are as lax in this matter as others.

Although at the May meeting the Council is supposed to be occupied with high educational matters, it will not be able to exclude more painful duties. We understand that there are several cases in which charges against practitioners of employing unqualified assistants in a way of which the Council has repeatedly and significantly expressed its strong disapproval will have to be investigated.

THE debate upon renal dropsy at the Royal Medical and Chirurgical Society is to be reckoned amongst the chief features of medical interest of the year. The discussion upon "immunity" recently raised at the Pathological Society, from the greater novelty of the subject, naturally attracted a larger audience; but the speakers represented the practical pioneers of pathology and bacteriology, while the debate upon the every-day subject of renal dropsy was necessarily carried along the more uncertain ground of deductions drawn mainly from clinical observations, and many of those who spoke merely gave their own interpretation of facts which were not in dispute. It is interesting, though by no means surprising, to find that this subject

could furnish material not only for a lengthy paper from Dr. DICKINSON, but also for a discussion which consumed the available limits of two meetings, and gave evidence of great divergence of opinion amongst many physicians whose position and clinical experience entitle their views to respectful consideration.

Such differences of opinion were apparently to a large extent the result of the attitude assumed by Dr. DICKINSON towards the part played by the capillaries in acute and chronic forms of dropsy dependent upon acute or chronic kidney disease. His ideas were in the main foreshadowed in his Harveian Oration. They were then objected to in certain quarters, and in answer to the challenge he promised to present them more fully in his communication to the Royal Medical and Chirurgical Society. In his preliminary remarks he traced the various agencies under which fluids pass through the capillary walls, laying especial stress upon filtration or transudation under pressure. Step by step he elaborated this idea, and at the same time gave his reasons for considering that osmosis was an insufficient and unsatisfactory explanation; indeed, at a later stage he did not hesitate to say that the theory of osmosis "was dead—irrevocably and thoroughly dead." Having thus gone a certain distance on lines of destructive criticism, he threw out the idea that the association of œdema and increase of tension could be attributed to some condition of the capillaries due to abnormality of blood, which both hinders its passage and promotes transudation. Turning to chronic conditions, he maintained that the associated cardio-vascular change is the direct antagonist of dropsy, and he adduced an array of cases, tables, and cardiac diagrams in support of this contention. By ingeniously contrasting the conditions met with in acute nephritis with those of granular kidney, an air of greater probability was afforded; since with the former there is much dropsy with slight hypertrophy, while with the latter there is much hypertrophy with little dropsy until towards the fatal termination, when dilatation of the heart is accompanied by an increase of dropsy. These facts, however, have previously been claimed (and were claimed again in the course of the discussion) in support of the older theory of the conservative hypertrophy of the arterioles. Dr. DICKINSON, while he admits the truth of Dr. GEORGE JOHNSON'S description of the muscular hypertrophy of the arterioles, nevertheless believes that the observations of SIR WILLIAM GULL and Dr. GAWEN SUTTON upon fibroid thickening were equally true; but having gone so far with previous workers he parts company with them, and endeavours to refer all questions of obstruction to the circulation and consequent transudation to changes in the capillaries rather than to changes in the arterioles, even though the nature of the capillary obstruction must be left undeclared. His final conclusions are peculiarly noteworthy, since they comprise his views not only upon renal but also upon cardiac dropsy. "Under heart disease there is diminished absorption without any presumption of increased exudation, or not to any important extent. Under kidney disease there is increased exudation without any necessary or constant diminution of absorption. Both are essentially connected with modifications of blood-pressure—in one from obvious obstruction to the venous return; in the other from some presumably obstructive condition of the capillaries, which is attended with enhanced exudation from them, and associated with increased pressure within the arterial system."

Dr. GEORGE JOHNSON, whose views upon the stopcock action of the arterioles are so well known that they require no restatement here, once more raised his voice in support of his doctrine that the arterioles could impede or arrest the circulation, and maintained that there was no evidence that the capillaries possessed a similar power. He thought there was no evidence of an increase of capillary pressure in renal dropsy, and he inclined to the idea that renal dropsy might be best explained as a vital act of the endothelium excited to eliminate certain noxious solids and fluids from the blood. Dr. PYE-SMITH dwelt upon the importance of distinguishing two forms of dropsy with renal disease—a late "hydraulic" variety, which was purely cardiac in origin, though associated with granular kidney; and an early or renal variety, found with the large red or the large white kidney. So far his views appeared to be completely in harmony with those of Dr. DICKINSON, and indeed of most subsequent speakers; but in his explanation of the renal variety he stood alone in regarding it as possibly an inflammatory effusion, and not true dropsy, the seat of the inflammatory changes lying in the connective tissues. The cardiac origin of the late dropsy of renal disease received the support of Dr. DOUGLAS POWELL, who also thought that the high tension pulse of kidney disease had nothing to do with the production of dropsy. Dr. BROADBENT similarly accepted the explanation of the dropsy of old-standing chronic Bright's disease, and, without definitely accepting Dr. DICKINSON'S explanation, thought that it was in all probability the most correct theory yet formulated. Dr. SANSOM argued in favour of auto-intoxication, and referred to the late Dr. WOOLDRIDGE'S experiments with the injections of toxines into the blood. The influence of uric acid upon the contraction of arterioles was also mentioned, and an attempt was made to show that the more or less rival theories of Dr. DICKINSON and Dr. JOHNSON were perhaps not wholly irreconcilable. An unexpected jubilant tone pervaded Dr. DICKINSON'S reply, and he naturally adhered to his view that the capillaries were the primary seat of the obstruction, whatever might subsequently take place in the arterioles. His belief in his theory was so strong that he thanked Dr. BROADBENT, not for supporting him, but for "supporting the truth."

At the conclusion of the debate the President, Sir ANDREW CLARK, stated that it had originally been his intention to give a short summary of the discussion, but he shrank from the task of being drawn into expressing any general conclusion upon the various views expressed. Admitting the great interest of the debate, we also may perhaps be pardoned for thinking that a final solution has not yet been reached.

IT has been our pleasant duty, as well as our privilege, to record from time to time some very creditable deeds on the part of medical officers of the military services. It is also not long ago that the name of GRANT of Thobal

fame was uppermost in men's minds, and now the self-reliance and pluck displayed by a very young officer of the Royal Artillery—Lieutenant MACMUNN—have attracted attention. The great training ground of India has afforded them, as it has done to many of our officers, an opportunity for the manifestation of qualities which might otherwise have never been exhibited at all. Some of these various instances have been illustrations of what is commonly called "pluck," some of devotion to a sense of duty, some of enterprise, fortitude, or what not,—for courage takes a variety of forms, and is of different qualities. It has been the frequent theme of poets, philosophers, and essayists. In so far as physical courage is the outcome of physical energy—of constitution and temperament, for example—it is physiological in its nature and origin. It is often the resultant of a young and vigorous vitality, prodigal of life, in which the whole animal machinery is adjusted in harmonious action and toned with the right sort of temperament. The nervous centres are irrigated by blood streams pumped into them by a vigorous heart; the tissues flow with healthful sap, and the will moves straight along the highway to action, without lingering in any by-path, to be "sicklied o'er with the pale cast of thought." Men of this stamp seem to be without any sense of fear whatever. Deeds of daring are to them but a pleasurable excitement; risk and danger simply add a *soupçon* of exhilaration to the work. This is a form of animal courage, of an eager and impetuous sort for the most part, born in certain men and races. It is a terrible force in attack, but liable to panic, and unstable in so far as it is influenced by fluctuations in health. There is another type, the antithesis of this, in which great courage is manifested by those who are popularly styled highly-strung nervous men. Under excitement, or when suddenly called upon to face great danger, and under states of nerve tension, such men become cool, deliberate, and altogether regardless of fear. They are frequently men of marvellous resolution. The pallid face and apparent manifestations of "funk" are really but an outward sign of the inward working of the physiological mechanism. They answer to NAPOLEON'S two o'clock in the morning courage. We once knew a determined dog that went out of his own accord and doggedly laid himself in wait at the corner of a street for his enemy. He was in a nervous quiver from the tip of his nose to the tip of his tail. Nevertheless, the other dog found him resolute enough. But there are many types—too numerous to mention—such as the intellectual and moral kinds of courage, and that intimately associated with the phlegmatic temperament, in which doggedness of purpose and insensibility to emotion and pain are the main elements.

Courage and fortitude are two very different things. A man may exhibit great pluck and "nerve" in facing an unexpected danger who would be crumpled up by the slow fire of affliction, or worn out by the friction of continued difficulties, or stunned by the impact of repeated blows. The ardour and *élan* of young troops will impel them to attack at any odds, but they are liable to lose their heads in surprises, and to be influenced by the contagion of fear and panic. On the other hand, although the older and more wary soldier may be less keen about attacking, it is uncommonly hard to drive him from his purpose when once he begins. The physical courage, which in the main depends upon physical qualities, and is fortified by discipline, is, we imagine, rather likely to be weakened by education and thoughtfulness; and it becomes a nice point, to determine whether the increase of the soldier's efficiency in one direction, by education and the exercise of his intelligence, may not be diminished in another, when troops are called upon to undertake the self-sacrificing duty of a highly hazardous or impossible service for some great, but to them unknown, strategical gain. It requires the absolute obedience of an unreasoning mind to attempt the impossible for an unknown object. Courage under such circumstances is the fruit of the tree of ignorance, and not of knowledge. Fearlessness is often the result of ignorance of danger, as in the case of children and some semi-civilised nations. The bravery of some men is intimately associated with their vanity. Apart from vanity they are cowards. They will do anything so long as it is in the presence of spectators or in the expectation of fame and praise, just as there are some men whose bravery may always be counted on regardless of praise or blame, and who would be heroes in the dark. Although courage is born in a man there are some excellent substitutes for it, such as the force of fanatic zeal and fatalistic belief; and it can be wonderfully developed—it may almost be said to be created—by training and by familiarity with danger, provided it be not a danger that dominates the imagination with a feeling of powerlessness. BUCKLE was right in saying that impressions made by the forces of nature developed fear and superstition, and that men do not grow braver by living in a land of earthquakes. The courage of even the bravest man is not any fixed quantity. It is not always the same by any means. It depends greatly upon varying but unrecognised states of health, for one thing; and for another, perfectly new kinds of experience will sometimes impress the imagination and instil timidity: the boldest cross-country rider may turn pale in a boat. One of the great merits of RUDYARD KIPLING'S graphic sketches consists in this: it has raised our estimation of the British soldier, who undoubtedly possesses, with much that is coarse and brutal, some noble qualities. He is patient, brave, dogged and determined, generous, and the least vindictive of men; and TOMMY ATKINS is not given to hurting a dog or a little child. But after all is said and done, courageous men are, like poets, born, not made. Take the latest instance, Lieut. MACMUNN. Accompanied by fourteen Goorkhas and some Panthay mule-drivers who had charge of a convoy of some commissariat mules, he marched twenty-four miles through a hostile country subjected to the fire of a concealed and stockaded enemy. He was little more than a boy, and alone with troops he had never seen before. He pushed on to Sodan, whither he was going with some rum for the little garrison there. He "rushed" several stockades and crossed a river under fire, having by his self-reliant leadership impressed some of the bravest troops in the world—the Ghoorkhas—with admiration of his pluck. The GRANTS and MACMUNNS of our public schools leave England with the corners of the British flag grasped unconsciously in their hands, and spread it over the four quarters of the globe. It is to them, and men like them, that we owe our national name. A handful of boys is shipped to Africa or

Egypt, to the Black Mountains or Burmah—no matter where; and, as long as they can stand, we may depend on them to push on. Bad health they merely look upon as bad luck; and, having denounced the heat, they do their utmost to forget it in some form of sport—of which the best is probably, in their opinion, fighting. Anyone who knows Burmah, for example, knows this class of man; he laughs at fever until smitten by it, and laughs again when he recovers. He goes sadly into hospital, but comes out of it quite cheerful when cured, and hopes he has not lost his opportunity. His soul, in times of peace, is given to his gun and polo pony; in times of strife, to getting these to the scene of it; and, having got there, to getting further. So the tentacles of British rule are pushed out, not to be withdrawn. So England has become an empire; and, while force of will and pluck endure, she will extend her boundaries from sea to sea and land to land. It may seem vainglorious to say so, but no other nation works and plays as England does on foreign soil; no other nation kicks a football in the Afghan Hills, or wields a cricket bat in Upper Burmah. No other nation persistently defies climate and disease, and labours under a tropical sun or amidst icebergs with the same indomitable perseverance, scornful in the matter of difficulty and unconscious of defeat. Any Englishman with work to do will do it if he can or drop. Thousands upon thousands of them do drop, but thousands more press on. The giant in the fable who "smelt the blood of an Englishman" was doubtless allegorical and certainly ubiquitous. The motto of the regiment to which MACMUNN belongs, and the nature of the nation of which he is a son, are both of them "ubique."

THE ordinances made by the Commission appointed by the Scottish Universities Act of 1889 have now been issued in their final form, and were brought before the House of Commons on the 10th inst. Notwithstanding the opposition of Mr. HALDANE, Dr. CLARK, and Sir G. TREVELYAN, they passed the House by a large majority of votes, having been supported by the able and thorough advocacy of Professor JEBB and Sir H. ROSCOE. We referred last week to the unsatisfactory position in which the subject of *materia medica* is placed by the ordinances dealing with the study of medicine, but this was a merely incidental question raised by Dr. FARQUHARSON. The main discussion was very important because it practically decided whether "extra-muralism" was to be introduced into the other faculties as well as into the Faculty of Medicine, in which everyone acknowledged it had worked admirably and with marked advantage to the teachers as well as to the students. Professor JEBB pointed out most clearly the differences in aim between the education of the student in arts and of his brother student in medicine. The study of medicine, he said, is a professional study, and the fitness of the medical student for the practice of his profession can be tested by a proper series of examinations; and, provided he has the theoretical and practical knowledge, it is not material where this has been acquired. Such is the usual argument; but, if this be everything, why should certificates of attendance on lectures and hospital practice be required by all examining bodies? Even such a purely examining board as the University of London dares not in medical subjects trust to examination tests only, but demands evidence of a very strict and thorough course of medical training. In fact, both training and examining are essential; indeed, we think too much stress is laid by many bodies on examination tests, which we know to be not always judicious, occasionally capricious, and in nearly every case, for many reasons, necessarily incomplete. Whilst other practical and technical branches of science can also be thoroughly tested, literature and arts come into a different category. In these it is the function of the teacher to educate the mind, and his teaching should be of quite a different type to that of those who would simply give instruction to assist a student through an examination, or who are obliged to lay special stress on those technical details which necessarily must be of primary importance to everyone whose object in life is to gain entrance into, and practise the arts appertaining to, a technical profession. It has been particularly creditable to the Scotch Universities that the teaching of their best professors in literature and arts has never been unduly cramped or fettered habitually by a regard to mere examinations. A very different course has been followed by the University of London, and private study of given works, aided even by "correspondence crammers," has taken the place of the higher University teaching. A candidate for its B.A. degree is no longer judiciously taught step by step the classical and modern languages as a University teacher would educate him, but his attention is assiduously directed to a set text-book or to a given author, and he learns little beyond these, because nothing else pays at the examination. If the Scottish Universities were to recognise teaching in arts otherwise than by the professors or lecturers under their control, they could not restrict extra-mural teachers to the great centres, but would have to include other teachers residing all over the kingdom, for many of these would be equally competent to teach, and the Universities would then become mere examining boards. Their great functions as teaching bodies of the highest rank would soon be gone, and the students would no longer take the trouble to go to the Universities, but would endeavour to pass the necessary examinations by the aid of local tuition. In short, the whole of the Scottish University system, with all its traditions and merits, would be destroyed. We are pleased to see that the Commission has determined on the appointment of additional lecturers and practical assistants in many subjects; a properly fixed payment for these lecturers should be made from the financial chest of the University. Such improvements are urgently needed, and the University Court, not the Senatus, should have the control of the finances. In such matters, and in other details of less importance, we would strongly support the reforming party; but we cannot ignore the many advantages in the new ordinances, or unreservedly support an opposition which, because of some defects not being removed, might have deferred all University reform to a distant and uncertain future. The position of the question of the higher education in London at the present

moment is surely a sufficient warning to injudicious and extreme partisans, content with nothing less than the adoption of every minute detail in their own schemes of University reform.

Annotations.

"Ne quid nimis."

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS AND THE FELLOWS OF THE COLLEGE.

WHEN the Council of the Royal College of Surgeons of England appointed a committee, at its meeting in March, to consider whether any, and if so what, further advantages could be extended to the Fellows, it was generally thought that at length the often-expressed wishes of the Fellows for a substantial voice in the affairs of the College were about to be fulfilled. So satisfied were some of the members of the Association of Fellows that they began to talk about dissolving the Association in the near future. All ideas of this kind must be absolutely abandoned, for it is probable that a great deal more pressure will have to be brought to bear upon the Council before any substantial concession is made even to the Fellows, to say nothing of the Members. The Committee of the Association of Fellows, hearing of the action of the Council, suggested that a deputation from the Association should be asked to meet the Committee, in order to set forth the views of the Association. To this request the Council has returned the following reply:—"That the Council do not consider it expedient that their Committee should receive any deputation, but that the Council will be glad to receive any written communication from any Fellow or Fellows of the College as to any further advantages, *not involving changes in the Charters and By-laws*, that might be extended to the Fellows." The words in italics clearly show that the Committee has not been allowed a free hand in regard to the recommendation of privileges to be granted to the Fellows. The election of the President of the College by the Fellows, which so many Fellows desire to see accorded to them, and the simplification of the present method of distributing and receiving voting papers in the elections for the Council, cannot be conceded without changes either in the Charters or By-laws, or both; so that even the consideration of these important measures must be set aside. In the same spirit, no doubt, every obstacle will probably be raised to making the consultation of the Fellows at separate meetings real and efficient. For the last eight years the Association has persevered, and it is now beginning to reap the fruits of its labours. That some concession will be recommended by the Committee of Council we do not doubt; but of this we are equally certain, that it will fall short of what the Fellows desire, and what they ought to have. Let it be remembered that all concessions which are not confirmed by Charter and By-laws must prove illusory. They will be revokable at the pleasure of the Council, and, like Dead Sea fruits, they may tempt the eye, but they will be liable to turn to ashes on the lips. Until the concessions are made real, substantial, and lasting by the sanction of the Home Secretary and of the Crown, let no thought of dissolution enter again into the minds of the Committee of the Association of Fellows, but let them redouble their exertions and fight the battle till the victory is complete.

WESTMINSTER SCHOOL.

WE understand that five cases of scarlet fever broke out in one of the boarding-houses between the 7th and the 10th of this month (inclusive), all of which were removed to the sanatorium. The cases were thus isolated, and it was hoped that the outbreak would end here, and that the work of the school might still go on. But on the 12th, 13th, and 14th four additional cases occurred in the same boarding-house. There have been also two other cases of scarlet fever among the home boarders. One was a day boarder at the boarding-house above referred to, and formed one of the first batch; the other case has arisen since the dispersal of the school. After consultation, it was thought advisable to close the school, and to take the opportunity of thoroughly cleansing and disinfecting the whole place. It was believed the contagion was still limited to the one house. The cleansing and disinfecting are now in progress, and Dr. Bristowe, the medical officer, has every reason to believe that the school may safely reassemble in the course of two or three weeks. The primary source of infection has not been ascertained; but it is clear that the first group of patients must all have contracted it from the same source. The later cases no doubt caught the disease from the earlier ones. The outbreak has been of a remarkably mild type. Not one of the cases has given cause for any anxiety, and most of them have been so slight that, but for the light thrown upon them by other cases, they might easily have been overlooked. It is but right to add that the school has enjoyed a remarkable immunity from infectious disease, and that this is the only term for over twenty-six years in which it has been necessary to disperse the boys.

THE RECENT ELECTION OF SECRETARY AT THE PATHOLOGICAL SOCIETY.

AT the annual general meetings of our learned Societies it is usual for the Council to put forward a list of names of candidates for the various offices, the individuals nominated being carefully selected after due consideration of their merits. This, of course, does not bind the Society at large to abide by the choice of the Council; and we should be the last to advocate that the power of ultimate selection should be taken from the general body of the members. But so much confidence has been hitherto invariably, and we think rightly, placed in the discretion of the Councils of the Societies that the ballot has come to be regarded by most of the members as a mere matter of form, and only a tithe of them usually go through the formality of recording their votes. Under these circumstances it is quite possible for a small clique to take advantage of the confidence of the Society and use for their own ends the prevailing laxity as to voting. In this connexion we regret to have to allude to what occurred at the last meeting of the Pathological Society. The Council, in the ordinary course, had asked a surgeon to allow himself to be nominated for the post of surgical secretary, and his name appeared in due course on the ballot-sheet. Certain members of the Society connected with a particular hospital thought that one of their own staff should be appointed to the post, and so they came down *silently* and voted in a body. They represented but a small proportion of the meeting—an insignificant minority; for the greater number of members present were contented to believe that the nominees of the Council were safe. We can only conclude our remarks on this unpleasant incident by recording the surprised and indignant feeling of the meeting as expressed afterwards by groups of its members who discussed the subject. The moral to be drawn from the occurrence is obvious. Every member of a learned society who wishes

to preserve the traditions of the profession in these matters and uphold the power of the Council should take care to perform the trivial and simple, yet all-important, duty of recording his vote on these occasions; and it is well worth consideration by the Society whether any additional nominations to those on the circulated list should not be made sufficiently public to enable all to express an opinion on the relative claims of candidates.

SUSPENSION OF A POOR-LAW MEDICAL OFFICER.

WE gather from the *Cheltenham Examiner* that Mr. Walters, one of the district medical officers of that town, has been suspended from his duties for not visiting without an order the child of a person receiving parish relief. We consider that Mr. Walters has been badly treated, as he did nothing legally wrong, and we strongly advise him to appeal to the Local Government Board. If the rule relating to the granting of orders be ignored by parochial medical officers, appointments of that nature will not be worth having, and it will tend still more to increase the erroneous impression that parochial medical officers are at the beck and call of anyone choosing to send for them. We may mention that Mr. Walters's legal advisers, and also the clerk to the guardians, considered he had acted according to the Consolidated Orders.

THE IDEAL CONSULTANT.

WHEN, nearly a generation ago, Sir Henry Acland in a memorable publication introduced the Oxford Museum to the academic world and foreshadowed the benefits it would bring to liberal culture as a whole, and more particularly to that of the physician, he gave a picture of the "ideal consultant" which, if more comprehensive than detailed, may be said to come as near perfection as such compendious characterisations are capable of reaching. In a quotation from Suidas he adduced the answer of the consultant Trophilus, when asked to define the all-accomplished physician:—"It is he," said Trophilus, "who is able to distinguish between what can and what can *not* be done." This definition may be said to cover every requisite in the medical adviser in whatever circumstances the exigences of his calling may place him; but it does not, of course, enter into native aptitudes, or acquired dexterities, or in short into the *ensemble* of qualifications which combine in the physican who is ever ready and never at fault. One definition, or rather indication, of what the successful consultant really is was incidentally given some years ago, by an outsider, in a strictly professional controversy—a definition which embodies the lay belief in the personal power of the physician apart from what special discipline can make him. "A great physician," he said, "is a great artist." This also is true, and will be found on closer analysis to explain the extraordinary success of practitioners whose book-learning or laboratory training is notoriously far inferior to their power in diagnosis and their success in treatment. The Athenian intellect at its best and in its most characteristic mood—essentially artistic as it was—seemed to fulfil the requisites which from time to time attain medical embodiment in a Sydenham, or, to come within our own day, in a Bamberger, whom, *consensu omnium*, each morning's encounter with cases of every kind in the Vienna wards found seldom or never at a disadvantage. That intellect, in its combination of nimbleness with strength, of centripetal insight with sense of proportion and judicial balance, has been described for all time by Thucydides in his wonderful picture of Themistocles. He dwells on the native understanding of "that Athenian of Athenians"; on his power, without previous information or after-thought, with, indeed, the briefest consideration of the problem in hand, to form a picture in his mind of what it really implied and of what its solution would yield—diagnosis, in short, and prognosis, almost improvised as to readiness; and again, when the problem admitted of only an approximate or provisional solution he could—"this way and that dividing the swift mind"—alight on the better and avoid the worse interpretation, even in the absence of previous prompting or of the data indispensable for less artistic minds. The whole passage (*Thuc*, i., 138) is well worth pondering in this connexion, and will serve to explain how the idea of an "artist" dominates the popular conception of the consummate physician—as is, indeed, involved in the German word "Arzt," which Becker rightly derives from the Low Latin "artista." Noteworthy, too, is the fact that the intellect here typified is always genial, always repays the confidence it invites by possessing the patient with the belief that his malady is indeed of personal interest to his adviser, who considers, and pronounces, and prescribes as if he were in the other's place. That is what Celsus means when he talks of the "hilaris vultus" of the ideal consultant—what Horace implies by the "deformis ægrimoniæ dulcibus alloquiis." The character thus equipped by nature becomes more and more developed by experience, till, as statesmen and men of letters, and indeed the moral and intellectual grandees of every age, combine in attesting, humanity appears in no more admirable or lovable form than in that of the "ideal consultant."

THE JOURNAL OF PATHOLOGY.

THE publication of the first number of the new *Journal of Pathology*, of which Dr. Sims Woodhead is editor, is an event which requires a few words of special notice; for, notwithstanding the large number of active workers in this field, they have hitherto been content to record their observations in the Transactions of societies and the columns of the general medical press. But we gladly welcome a special medium for their publication, which has long been needed in this country. The journal is apparently planned upon much the same lines as the now well-established *Journal of Physiology*, and we have no doubt it will attract many excellent contributions. We have before us the advance sheets of the first issue, and can testify to the variety and value of the papers it contains. The first place is rightly given to an article by the foremost pathologist of our generation, Professor Virchow, who writes upon Transformation and Descent with the lucidity that characterises all his work. He expounds once more the nexus between physiological and pathological processes by reference to the cell doctrine, explains how metaplasia is brought about, and restates the argument in support of tissue proliferation in relation to new formations. Dr. Metchnikoff of Paris contributes a paper on the Aqueous Humour in Relation to Micro-organisms and Immunity, and proves from his observations that the aqueous humour is not only "a good cultivating medium for micro-organisms in general, but also for the special microbe to which the animal from which the aqueous tumour is taken is immune." Although occasionally the aqueous humour has bactericidal properties, these stand in no relation to the immunity of the animal concerned. Dr. Sidney Martin follows with an interesting account of a Chemical Examination of a case of Anthrax in Man. An important Study of Cerebro-spinal Pressure is afforded by Mr. H. Percy Dean, based on clinical and experimental observations; and Dr. James Mackenzie of Burnley deals with the question of Venous Pulsations, and describes a ready method for their record. His paper is enhanced by detailed accounts of cases, and the conditions under which the phenomena occur are fully stated. The waves described and graphically figured are shown to be

both of auricular and ventricular origin—in relative predominance according to the extent of the cardiac defect present. Professor Halliburton records his later observations on Mucin in Myxœdema; in only one case (furnished by Dr. Oliver) did the amount of that substance in the heart tendons much exceed the average normal percentage. An abstract of Dr. Grawitz's article on Hæmorrhagic Infarcts of the Lung, contributed to the Virchow "Festschrift" follows, the conclusion being that "there is no connexion between infarction and embolism, but rather that infarction is the result of chronic bronchitis combined with cardiac weakness." Dr. Alex. Miles writes on the Microscopic Pathology of Cerebral Traumatism, and Dr. Herbert Spencer on Hæmatoma of the Sterno-mastoid Muscle in New-born Children; Mr. Andrew Pringle has a note on Paraffin Infiltration by Exhaustion, and Dr. A. E. Wright on the Relations between Plasma and Serum and upon a Modification in the Method of Obtaining Serum.

THE VITALINE CRAZE.

To call it consternation is not too strong a term; for although we do not accredit the statement that ten thousand people in Russia have received injections of the stuff "vitaline," there is without doubt a panic on the subject of this injection—this most absurd so-styled "rejuvenator" of old idiots and antidotal preserver of young ones. The story of the "discovery" of this "new remedy" is an old story revived. A wanderer from his native land, this time one Gatchkowsky, an engineer, was sent on his own business into the Trans-Caspian territory, and there, amongst a primitive people, he heard of a new specific. "A Chinese *savant*" revealed to him the particulars of a miraculous compound medicine which, being instilled into the blood of man, would cure everything: it was more than a mere panacea; it was a "rejuvenator," a curer of such fatal diseases as consumption of the lungs without fail. All previous wonders were to be surpassed by it, and the scientific world was once more to be set in commotion by a discovery that should show how natural law in disease could be overthrown in wholesale fashion. For a time—happily short, yet long enough—the new practice made its way, and we are told the regular practitioners of medicine in St. Petersburg were dumbfoundered by the presence of the "tide of fashion and of favour" that set in. To some invalids, real or supposed, the "vitaline" was administered by injection subcutaneously; to others it was administered internally. Prices for the remedy and its application varied; the rich paid largest fees, but the poor also paid, and some of them also largely. The Czar himself was counselled—by whom is not known, but we should suppose not by any authorised medical adviser—to let his son, the Grand Duke George, undergo the treatment. At last a somewhat less important man, but still one of great importance, was subjected to the remedy, and he, General Gresser, the Prefect of St. Petersburg, and one of the firmest and shrewdest of the guardians of the imperial power, was led to submit himself to the operation, and by the submission sacrificed his life. How, precisely, the sacrifice was brought about we have as yet no satisfactory details. The discoverer of "vitaline" turned round in his defence from the sublime to the ridiculous. The omnipotent remedy at once diminished from its potency into a mere mixture of borax and glycerine—a harmless mixture for good or for evil. If death resulted from the use of it, a dirty syringe used for the injection must have been the true cause; but M. Gatchkowsky, having made a clean breast of his discovery, will practise the art of cure no more; and if he be not, in the panic, charged with political offence and of systematically poisoning the Prefect, he is fortunate. The history of this latest blast of quackery recalls some of olden times which it has been the duty of THE LANCET to expose and trample out. The case of the notorious St. John Long comes at once to mind. In this case the results which followed the practice of the astute quack were practically the same as those we have just witnessed. What is more, the secret, which Long sold, as was reported for £3000 to a lady of fashion, turned out, in the end, to be no secret at all. The element of treatment was counter-irritation, and the vaunted composition employed as a liniment was nothing more and nothing less than spirit of turpentine and strong acetic acid. One day the famous nostrum went wrong in its action; it caused, or was accused of causing, a diffuse cellulitis in an unfortunate victim, and then not only was its fate sealed, but in defence the secret was exploded in proof of its harmlessness and its perfect simplicity. Against this specimen of quackery the founder of THE LANCET fought tooth and nail. He neither hesitated nor paused until the mischievous practice was expelled for good. In this fight, moreover, he had not the whole voice of the profession with him. On the contrary, one man in the profession stood by the delusion to the last, and vainly maintained his advocacy of it after the bubble had burst and its inventor with it. It is our business still to expose, and protest against, these frauds on humanity, exploited as they are at the risk of human suffering and death.

PRESENTATION TO DR. HOLMAN.

WE have been favoured by the *Surrey Leader* with an account of an event, interesting from its nature to the profession of medicine, and suggestive of the high point which it is possible for a general practitioner to attain in the esteem, respect, and affection of those who are at once his patients and his neighbours:—Dr. Constantine Holman, J.P., of Reigate, was, on Saturday, the 14th inst., presented at the Reigate Town Hall with a massive silver bowl, four silver baskets (engraved with the crest of the recipient), and a cheque for £130 (the balance of the Testimonial Fund). Dr. Holman has been in practice at Reigate for forty years, and during the greater part of that time he has been the chief partner in the firm known until recently as Holman, Hallowes, Walters, and Berridge. Besides enjoying a large practice Dr. Holman has taken a prominent part in public affairs—as a justice of the peace and one of the pioneers in the establishment of the Reigate and Redhill Cottage Hospital. He is also, and has been for some years past, hon. treasurer of the Royal Medical Benevolent College, Epsom, an institution in which he has always taken the deepest interest, and for some years was the hon. treasurer of the British Medical Association. Dr. Holman succeeded two eminent country doctors—Drs. Thomas and Peter Martin—who in their day were regarded with no small degree of respect among their wide circle of patients—a respect which has been bestowed on their successor, towards whom all classes united in expressing their esteem on his relinquishing practice at Reigate. There was a large and distinguished company at the presentation. The Vicar of Reigate made the presentation in a very effective speech. Those, he said, who had known Dr. Holman in time of suffering would not readily forget his cheerful, reassuring voice by the sick bed, and his deep sympathy when skill and resource seemed to be of no avail. He would carry with him in his retirement a consciousness of duty done and of firm friendships formed. Dr. Holman, in acknowledging the gifts, said it had been his aim not only to be the doctor of the patient, but to be his friend. He had never believed in the simple application of drugs for the cure of disease, unless the medical man who was applying

those drugs was as deeply interested in the case as the patient who was suffering from the disease. He was thankful to say that during his professional career in Reigate he had enjoyed the affectionate confidence of his patients. In honouring him that day they were encouraging many members of an honourable profession.

THE BETHNAL GREEN AREA.

IT is satisfactory to know that the wretched quarter, lying immediately behind Shoreditch Church, called "the Bethnal-green area" is condemned, and will shortly be pulled down. Many of the cottages are already abandoned, but the majority of the inhabitants are still there, and the population is numerous. This being the case, we see no reason why the sanitary condition of this locality should be allowed to go from bad to worse. It is so bad that a scheme for the demolition of the quarter has been sanctioned. This, we should have thought, is a strong reason for keeping a very close watch over the district. The contrary appears to be the practice. On the pretext that the property is to be pulled down no repairs whatever are effected. We recently visited a small cottage where we found the pan of the closet broken. A wall which protected the row of small back yards had been demolished, and small boys amused themselves by flinging stones. One of these missiles had struck and broken the pan of the closet. On the other hand, the water waste preventer was deranged in such a manner that the water flowed incessantly, and, entering the broken pan, would soon flood the yard. To prevent the water reaching the closet the inhabitants opened the yard tap which was near a gully and drain. Thus in this cottage the water is running day and night; and, in spite of this great waste of water, the closet is in a filthy and most insanitary condition. A few shillings would probably suffice to effect the necessary repairs. The sanitary inspector has seen the place, the landlord has been communicated with, and yet nothing has been done. Nor is this the only case of such neglect in the locality, and this incident opens out an important question. Not merely a few weeks, but often several years, elapse between the time when a district is condemned or is about to be condemned and the time when it is actually demolished. During the whole of this interval no care is taken of the property, and even the most urgent defects or breakages are not repaired. Thus the danger to public health due to the existence of such quarters is increased for the time being by more than normal negligence.

THE LONDON WATER-SUPPLY INQUIRY.

THE inquiry into London's water-supply is progressing rapidly, and already much important and interesting evidence has been given. The engineers of the New River Company and the East London Company have been heard, and their joint evidence would appear to indicate that there is no reason to fear that the supply of water to London will become inadequate for some time yet. In 1891 the average daily supply of the New River Company was 33,028,000 gallons. Of these, 22,500,000 gallons came from the Lea, and the remainder from Chadwell springs and wells. The largest number of gallons supplied on a single day was 42,000,000, in January, 1891. The question of storing the water coming down the Lea in winter months was possible, and had been considered, although there was no scheme in hand for it. The engine superintendent of the New River Company, who has charge of the filtration of the water, said there was no possibility of communication between the filtered water and the drains below. The filter beds were periodically cleaned, and every care was taken to properly filter the water. The engineer of the East London Company felt certain that the water supplied by his company was improving. In the company's supply of 40,000,000 gallons a day they would take 20,000,000 gallons from the Lea, 10,000,000 from the Thames, and 6,000,000 from the wells, and they would get the remainder from storage. They could store 910,000,000 gallons. The water from the gravel springs at Hanworth, from which they could get 2,000,000 gallons, had turned out satisfactorily on analysis. Between the two companies it was proposed to draw something like 44,000,000 gallons a day from the chalk wells more than at present. There was a huge volume of water passing into the Thames from that locality, and it was stated that the fact of their drawing this amount per day would not be much felt—if felt at all—by those living in the locality. Their water would come from below the clay, so that the surface water above the level of the clay would not be touched. Further evidence, of course, will be heard on the question of the quality of the supplies, and it is to be hoped that the grave complaints that have been recently made about the condition of the water supplied by certain companies will come on for consideration. Some explanation may be looked for also of the fact that, during periods of drought a few years ago, one of the companies was compelled to limit the supply by cutting off the water at various times through the day. The increase that has taken place during the last twenty years in the number of houses in the districts supplied by the companies is not the least formidable fact which confronts the Commission, and only that future scheme can be accepted which shall provide for the abundant supply of pure water in times normal and abnormal.

OBSTETRICS AND GYNÆCOLOGY IN MOSCOW.

THE report of the lying-in-department of the Golitsinski Hospital in Moscow for 1891, by Dr. Inoieffs, has just been published, and in addition to its statistics contains several interesting papers. The total number of labours conducted in the department during the year was 713. Very nearly equal numbers of these were concluded during each of the four quarters of the day, the slight difference existing being in favour of the evening quarter—namely, from 6 P.M. to midnight. Detailed tabular observations are given of the 17 cases of twins and of the 24 cases of contracted pelvis, that is to say, where the external conjugate diameter was below 18 centimetres. There were 4 fatal cases—1 from croupous pneumonia, 2 from anæmia, and 1 from septic endometritis and parametritis. The antiseptic employed was corrosive sublimate. The use of the forceps was required in 15 cases, laceration of the perineum occurred in 14 cases, and rupture in 17. There were 7 cases of craniotomy, and one of evisceration. With regard to the puerperal period, there was no fever—i.e., temperature above 38° C.—or other complication in 599, or 84·1 per cent., of the cases. There were only 8 cases of true puerperal diseases—i.e., 2 of colpitis with endometritis, 4 of endometritis, one (fatal) of septic parametritis with endometritis, and one of mania. In the 8285 cases attended in the department since 1868 there have been 309 cases of true puerperal diseases and 64 deaths, 20 of which are attributed to non-puerperal affections. In all this number the employment of the forceps was required only in 189 cases, craniotomy was performed 33 times, and evisceration once only. There is no mention of the Cæsarean operation. Amongst the reports of the gynæcological sections there is one dealing with electrical treatment by Dr. Dyski, a tabular view of twenty-eight cases being given. The best result was obtained in parametritis, a lesser degree of success being secured in oöphoritis, and still less in salpingitis. With regard to fibromata, some degree of subjective improvement was

always obtained, but the tumour did not in any case appear to become reduced in size. This agrees with the experience of most other Russian writers on the subject—Massen, Himmelfarb, and Kholmogoroff, — though Neéloff, who reported twenty cases to the Kieff Obstetrical Society in 1890, had succeeded in reducing the tumour in seven instances to some small extent. Dr. Dyski calls attention to two cases of gonorrhœal endometritis which had been treated unsuccessfully by various ordinary methods, and which only yielded to repeated electrical applications, the anode being introduced into the cavity of the uterus. In one case the discharge so nearly ceased that the patient considered herself cured, and did not return after eighteen sittings; the other, which was complicated with salpingitis and perisalpingitis, was quite cured after twelve applications of the induced and six of the constant current. Dr. Dyski remarks that the antiseptic properties of the anode of a galvanic current render it a peculiarly suitable agent in obstinate gonorrhœa of the internal genital organs in the female. It is of course advisable in all gynæcological cases where electricity is employed not to depend upon it entirely, but to make use of other local and general treatment simultaneously with it. In several of the cases described in the table the induced current was used for the earlier sittings and the constant current in the later ones.

THE NOISE OF BANDS OF MUSIC.

MR. MOSSE, treasurer of St. George's Hospital, writes to a contemporary to ask those societies which assemble in the parks, and are accompanied by bands of music, to be good enough to direct the bands to cease playing while passing near the hospital. The request is reasonable, and will doubtless be regarded. The amount of suffering occasioned in London by the noise of the streets will never be known. All who have any influence will do great good by reducing it in every way. It must be allowed that the methods of many good associations are clamorous. Take, for example, the noise and disturbance of the streets on a Sunday caused by a "lodge" undertaking to make a collection for a blind asylum or a hospital. Surely the highly organised lodges can do their benevolent work without the sound of trumpet and the beat of drum.

DIRT AND DISCOMFORT AT CORONERS' INQUESTS.

THE report of an inquest held at Battersea a few days ago reminds us of the delays and inconveniences connected with such occasions which, not always with due reason, absorb the time and patience of medical men. In the case referred to the body of the deceased had not been cleansed prior to post-mortem examination either by relatives or by any official, the mortuary being without an attendant. Consequently the discharge of this preliminary duty fell to the share of the medical witness employed upon the case. The matter was mentioned in court, and the jury very rightly maintained that bodies in future should be cleansed and prepared prior to examination. They also recommended that a mortuary keeper should be provided by the local vestry. This decision will commend itself as an expression of moderation and good sense. It is obvious that no mortuary room can be efficiently managed without a regularly appointed attendant, and the cleansing of the dead, if allowed to be neglected by friends or neighbours, should certainly be carried out by such an official rather than by the practitioner. There are certain other defects in the management of these official investigations which invite attention. Take, for example, one which almost ensures uncleanliness in the operator—the want of a supply of hot water. At the present day an examination will be completed in all its impurity, and the practitioner finds himself confronted by the further impossible task of trying to clean his hands and instruments with cold water, and perhaps a little crude carbolic acid. Another similar omission, if not of quite such absolute and primary importance, has much to do with the reasonable demands of civilised usage. This consists in the frequent absence or disuse in mortuaries of warming apparatus. For want of this we have become familiar with the painful spectacle of medical men shivering in the cold of a hard winter whilst performing duties certainly appertaining to their profession, but none the less of a decidedly unpleasant nature. Why should they be condemned to this penance? The cost of an occasional fire would suffice to do away with it; and this much at least should, we consider, be provided by the authorities. The above suggestions are not made merely in the interests of the medical profession. In the defects which they are intended to amend, and their inconvenient, or possibly even injurious, consequences, the public is also concerned. Let it therefore, like the Battersea jury, bring light to bear on some evident official errors, and seek to secure the correction of these by every lawful means.

THE HEALTH OF SOUTHEND.

WE referred incidentally on a recent occasion to a report on the system of sewers in Southend which was in course of preparation. When publicity was first given to the sanitary state of that town, Dr. Thresh advised that an expert in engineering should be called in, which advice was adopted. Mr. Mansergh advises that the sewers should be divided into high and low level systems, the latter to include all sewers which are tide-locked at high water—an arrangement, too, that will involve pumping of sewage; he further recommends enlargement of a sewer, improvement of gradient where the sewers are not self-cleansing, some prospective works in providing new overflow sewers, increased sewer ventilation and flushing, the stoppage of leakage, and the provision of increased outfall arrangements. The recommendations seem to cover a wide scope; but it still remains to be seen what is proposed as to the outfalls, as to which Mr. Mansergh reserves his report. We trust the sanitary authority will face the whole of the difficulties which are dealt with in the report which they have already received, and also the perhaps larger difficulty that may be involved in the matter of outfalls, which Mr. Mansergh promises to deal with "at a subsequent date."

DIPTERA AS PARASITES.

IN the *Journal of the American Medical Association* for April 9th, 1892, is an account of a human parasite, which, so far as we are aware, is unknown in this country. The particular case to which the article relates is recorded in a paper known as *Insect Life*. It records the case of a lady of St. Louis who suffered from the hominivorous habits of the "screw-worm." The attack commenced with nasal irritation, causing sneezing paroxysms of great violence. A diagnosis and treatment for influenza met with failure. The patient grew worse on the second and third days, having intense pain between the eyes, with considerable swelling of the face, nares, eyes, and pharynx. On the fourth day two or three white worms were expelled from the nose by sneezing, which led to a local examination, and hence a new diagnosis. Many white larvæ were seen attached to the nasal mucous membrane as far as its swollen condition permitted it to be seen. By instrumental means about thirty larvæ were extracted. Chloroform spraying and solutions of carbolic acid were not effectual in making the parasites loosen their hold. Indeed, every attempt to dislodge them caused them to retract and bury themselves more deeply in

the tumified and bleeding tissues. During the next three days instrumental means were continued by the medical men in attendance, and over two hundred larvæ were removed and put in alcohol. Some of them were taken from the posterior surface of the tonsils and naves by the use of indirect illumination and curved forceps. On the eighth day no more larvæ could be found, and relief began to be experienced; the inflammatory condition subsided and the structures infested by the larvæ gradually recovered tone and normal function without any permanent injury to any part. But meanwhile, during the acute period of her suffering, the patient developed a suicidal mania. She implored her attendants to allow her to end her life, and even argued with her physician upon the advantage to herself and family if her life could be ended. This suicidal tendency has been observed before in patients suffering from an attack of the "screw-worm," and all such patients require to be constantly watched during the acute period. The larvæ which were removed were nearly all fully grown, and would probably have come away spontaneously in another day. The method and time of lodgment of the ova could not be ascertained, beyond an indistinct recollection on the part of the patient of some moderate nasal disturbance after sleeping near an open window; there was no history of catarrh or ozæna. Cases of this kind of parasitic trouble, the article goes on to say, have been not uncommon at the St. Louis City Hospital. In the summer of 1888 there were five or six cases, four in 1889, three in 1890, and one or more in 1891. The assistant superintendent of the hospital is quoted as saying that "one of the cases in 1890 died from the exhaustion of the attack, and one died from an intercurrent disease while affected with a worm." Others recovered, but with greater or less mutilation. Not a few of these cases were in persons who were known to have slept in the open air, probably receiving the infecting ova while thus exposed. The cases generally occur in the more southerly localities, but it is by no means certain that all these parasitic invasions have the same genus of blowfly as their originator.

BOARDS OF GUARDIANS AND THE LATE INFLUENZA EPIDEMIC.

WE have observed with satisfaction the tendency exhibited by boards of guardians to adequately remunerate their medical officers in the discharge of their arduous duties at a time of great pressure, we may almost say panic, entailed by the influenza epidemic. Unfortunately the Risbridge Board (Suffolk) cannot be included amongst these liberal authorities. The medical officer for the second district of the union (Mr. Edward A. Piggott), having applied under Article 72 of the General Consolidated Orders for "a reasonable compensation on account of extraordinary services," received the following laconic reply to his application—viz., "The guardians, having considered your application, resolved that it be not further entertained." It is generally conceded by most right-thinking persons that "the labourer is worthy of his hire." The guardians of the Risbridge Union evidently think otherwise.

LEAD POISONING FROM WATER.

A REPORT reaches us of a fatal case of acute "plumbism" of two days' duration, caused by drinking the water supplied by the Bradford Corporation to the neighbouring district of North Brierly. According to the evidence at the coroner's inquest, Mr. Dearden stated he was called to see the deceased, and found the skin cold and damp, with retraction of the abdominal muscles; the patient suffered from vomiting and collapse, and a most pronounced blue line was found on the gums. Mr. Dearden also stated hat during the last twelve months he had attended about thirty cases of plumbism, none of which, however, had proved fatal. During the last three years he had seen on an average one fresh case of lead poisoning a week. For some time the deceased, during last summer, had a strong objection to the water supplied by the local board, and this induced him to carry water from a spring in his garden for use in his workshop. A severe and isolated case of plumbism like this, especially when there was a history of an independent water-supply, might be passed over as due to some special contamination; but the evidence of Mr. Dearden as to the existence of plumbism, so widely distributed amongst the population, raises strong suspicion that the contamination arises from the water supplied by the Local Board. Our readers will remember that in the case of the extensive outbreak of lead poisoning at Sheffield, which was the subject of a most searching inquiry, the earliest cases which came under observation were scattered among the poorer inhabitants, and that many medical men in the town were sceptical as to the real condition of affairs, till the poisoning assumed quite an epidemic character. As we have frequently pointed out, the action of certain waters on lead pipes is very insidious, and the first to be affected are those who are peculiarly susceptible to its action. Many circumstances, such as using the water first drawn in the morning, or extra pressure from the waterworks washing off the deposited carbonate of lead from the house pipes, may intensify the action of the poison by concentrating it. Whatever the cause may be in the case of the water supplied in this instance, the Bradford Corporation should at once undertake a searching investigation to ascertain whether the defect is local or general. They should carefully study the history of the Sheffield outbreak; for if with this warning they await events till "plumbism" becomes epidemic, they will incur grave responsibility.

THE PRESIDENT OF THE LOCAL GOVERNMENT BOARD.

WE much regret to hear that Mr. Ritchie is again indisposed. He is unfortunately suffering from a recurrence of the ischiatic abscess with which he was troubled a year ago. This has been relieved by operation, but it will of course involve his absence from public duties for a brief period.

AN "ERROR OF JUDGMENT" BY A GERMAN PHYSICIAN.

WE may without presumption congratulate the profession that its members are not often guilty of such a deplorable "error of judgment" as that which resulted in the recent imprisonment of a German physician. In this case the director of an establishment for the treatment of nervous disease was convicted of having assaulted, beaten, and whipped a hysterical lady patient under his care. The sentence of three months' imprisonment was, in our opinion, a remarkably lenient one. We must admit that in all probability the patience of the medical superintendent was often tried. No class of patients can be more aggravating when they choose than those who, while possessing their ordinary intellectual faculties, are either so weak or so perverse in will as to be practically the mere automata of disordered impulses. It is to be remembered, nevertheless, that the violence of blind force provides no remedy. Chastisement even in the case of children of itself is valueless unless it be guided by rule, unless it be used, we might say, medicinally. It has, like any drug, its appropriate aim and purpose, its proper action, its dose limited by known effects, and its hurtful excess. But in the case of adults physical correction is, of course, inadmissible where disease is concerned. It should be

remembered also that even with apparently pure hysteria there may coexist the germ of true lunacy, and this must be allowed for whenever restrictive means are thought of. The German physician who has in the case recorded, so inexcusably erred in his treatment will, we are assured, not find imitators in our own country.

THE GOOD SAMARITAN.

SPEAKING in a light and happy vein at the King's College Hospital Festival Dinner, before an audience composed largely of lawyers, although many eminent divines and doctors were present, the Attorney-General (Sir Richard Webster) playfully claimed to have found by a process of exclusion that the Good Samaritan must have been a lawyer. He gave his reasons for not assigning the distinction to various learned professions, and finally reached the conclusion that he must have been either a lawyer or a doctor, and then thought he had proved his point, because "no doctor would have poured oil and wine into an open wound." It would be treating Sir Richard Webster too harshly to consider this in the light of anything but an after-dinner joke, otherwise a very cursory reference to the history of the past would show that modern antiseptic treatment has only been reached by slow and painful stages, and that in the early days of surgery almost anything, solid or liquid, might have been employed in the treatment of wounds. We need go no further back than the *Arcana Fairfaxiana* of the seventeenth century to realise this somewhat humiliating fact; so that, in spite of Sir Richard Webster, those of a speculative turn of mind may still feel free to maintain that in the original parable the Good Samaritan was, as in the present day he so often is, a medical man.

HOUSING OF THE POOR IN AUSTRIA.

THE Austro-Hungarian Legislature has recently made an effort to deal with the unwholesome dwellings that abound in the poorer districts of the great towns. A new law has been enacted, and it bears the date of Feb. 9th, 1892. It is too soon, therefore, to say whether this measure will effect much good; but the prospect, it must be admitted, is not very hopeful. The law takes no action in the sense of demolishing unwholesome dwellings or of constructing better houses, it only encourages private initiative. This encouragement is given by exempting from taxation during twenty-four years workmen's dwellings built under certain conditions. First, it is stipulated that if the State withholds its right to tax, the local authority must act in a similar manner; thus the houses in question will be exempt at once from Imperial taxation and from local rates. The houses that are to enjoy such immunity must be built by the Communes or local authorities or by societies recognised as of public utility, or by establishments instituted in favour of the working-classes, by coöperative workmen societies, or by employers for their workmen. The law then goes on to enact that the houses built, to be exempt from taxation, must not have any dwelling-room below the level of the soil. Also tenements consisting of one single room must possess at least fifteen square metres of habitable surface, and not more than thirty square metres. If the tenement consists of several rooms these must not measure less than forty square metres, and not more than seventy-five square metres. Thus the law deals only with small tenements, but measures are taken to prevent these tenements being too small. Again, the law is to be applied only to cheap tenements, and a maximum rent is established. The rent is estimated per square metre of habitable surface, and is fixed at 1·75 florins per annum at Vienna. In all other towns which have more than 10,000 inhabitants the rent that may be charged shall not exceed 1·15 florins per annum per habitable square metre, and in all other places eighty kreutzers, or 0·80 of a florin per square metre. The silver or paper florin is worth 1*s.* 8*d.*, but the florin in gold is worth 2*s.* Presumably the law will apply to the usual currency—namely, the paper and silver florin. Should a higher rent be charged than that laid down by the law, a fine equal to ten times the amount of the overcharge will be imposed. The produce of such fines will be paid into the local poor box. Finally, and as if to hasten the work of rehousing the poor, a clause states that the benefits of this law shall only be accorded to such houses as are built within the next ten years. In other words, the Austrian Government offers twenty-four years' immunity from taxation to those who will within the next ten years build better and cheaper houses for the poor. This is satisfactory so far as it goes, but our experience in England teaches us that more than this will be necessary. The new law may do some good, yet it certainly will not solve the problem.

SLANDER AGAINST MEDICAL MEN.

THE case of Ward *v.* Hatfield is an instance of the facility with which the obvious and common words of a medical man may be misconstrued and turned into a ground of legal action against him. This was a case tried before Mr. Justice Hawkins, in which a nurse attending an obstetric case followed by purulent discharge, and proposing to attend another obstetric patient of the same practitioner, was advised by him to wash her hands carefully, as the discharge might be catching. The husband regarded this as equivalent to saying that his wife was suffering from venereal disease. An explanation was given and seemed to be accepted. But afterwards an action for slander was tried. It completely broke down. The witnesses for the defence were not even called. The judge stopped the case and directed a verdict for the defendant, with costs. The case is an instance of another fact—the advantage of being a member of the Defence Union. The plaintiff, in a letter to us, mentions how great was the comfort to him of having this effective organisation at his back to give him help and consideration.

THEMIS AND HYGIEIA.

HOW is it that the Goddess of Justice is so seldom "at home" to the Goddess of Health? If there is an abode in the community where hygienic science is systematically ignored, it is wellnigh invariably a court of law. The fact comes periodically before us in the shape of indignant protests on the part of judge and counsel condemned to pass their professional lives in an atmosphere which, compared with that wherein the social pariah they have mostly to deal with lives and moves, is as the "Inferno" to the "Paradiso" of Dante. The latest "bitter cry" from forensic quarters now reaches us from Edinburgh, where the Lord Justice Clerk (Lord Kingsburgh) recommends the court over which he so worthily presides as the fittest of all places for object lessons in bad ventilation. Dr. C. Hunter Stewart, in the course of some most interesting researches into the air of public buildings, had been combating the view that carbonic acid is the baneful element in the atmosphere of these resorts, and had shown that it was the organic matter exhaled from the skins and the clothes of their inmates that constituted the real source of mischief. Not the products of respiration, but "animal steam" was the cause of the pathological results arising from occupancy of those buildings, and he quoted in point the German army doctor who had all the soldiers of a particular barrack compulsorily bathed, with the effect of inducing a very marked improvement on the ventilation of the tenement. Upon this Lord Kingsburgh invited Dr. Stewart to carry his researches into the Edinburgh law

courts, where "he would find a much richer field in the way of organic matter and of everything else that was bad than any place he had yet tested." His lordship added—what is not more true of Edinburgh than of Dublin or the metropolis itself—that the "great unwashed" frequented the law courts more than any other class of the community. "It was the only theatre they had for which they had to pay nothing, and it was at the time when judges and counsel were under the severest mental strain that the courts were crowded with human beings, most of whom would be the better of having the German doctor's discipline enforced." Lord McLaren, impressed with the truth of this remark, "concurred with his learned brother," and added "that, since the courts must be open to the public, and only a limited number could be admitted, they should insist on no one coming in without being decently attired." Whether this is "the true solution of the matter," which Lord McLaren took it to be, we are doubtful; but it would be well if Themis took occasionally a leaf out of the book of Hygieia, and treated her in more sisterly fashion than she has sometimes been known to do.

THE PREVALENCE OF SMALL-POX.

SMALL POX still continues to spread. In the metropolis the number of new cases per diem exceeds any statistics recorded for some years. At Halifax fresh cases are arising, and the disease has appeared in several neighbouring places, such as Brighouse, Brookfoot, Rastrick, &c. The result is some considerable activity as regards proposals to erect hospitals either for districts singly or by twenty or more districts jointly. It is to be hoped that, with advancing summer, such arrangements, if made at once, will be really of a temporary nature; for few things have done so much to hinder the provision of adequate means of isolation for infectious diseases generally as the erection of semi-permanent hospitals which, at the moment, were styled "temporary." At Yarmouth considerable measures of precaution have been adopted. Twenty-seven inspectors were appointed to make a house-to-house visitation of the town, and to secure the vaccination of the unvaccinated and the revaccination of those running risk of infection. The infection hospital has been used for isolation purposes, and Dr. Bately reports that of the forty-nine cases that have occurred the greater number had been removed to the hospital on the Denes, and were now convalescing or convalescent.

NERVOUS SYMPTOMS AND SEQUELÆ OF INFLUENZA.

DR. C. K. MILLS of Philadelphia has published an exhaustive paper on this prolific subject, reprinted from the Transactions of the Philadelphia County Medical Society. The difficult question of discussing the nervous and mental phenomena of influenza he treats by dividing such phenomena into three classes:—(1) Symptoms and conditions which, although manifested in non-nervous organs, are directly traceable to a nervous origin; (2) affections which all would recognise as properly referable to the nervous system; and (3) affections occurring in nervous tissues and organs, although not constituting strictly nervous diseases. As regards the first class, he thinks that many of the most prominent pulmonary, cardiac, and vascular affections of influenza can best be explained on theories of nervous origin, and that, for example, the pneumonia of influenza is often due to vaso-motor paralysis. But to the neurologist the most interesting and important diseases developed either during or subsequently to an attack of influenza are those in which there are organic changes in different parts of the nervous system. Among such diseases are various forms of neuritis, including multiple neuritis, isolated neuritis, neuritis of cranial nerves, &c. The conditions in one class of cases—viz., articular and other pains with swelling—closely resemble those found in beri-beri. Cases of myelitis are also described as occurring, and anterior poliomyelitis and its analogue, bulbar paralysis, have also been described. Then there is quite an array of cerebral affections, including meningitis, hæmorrhage, and local effusions. A great many affections are ascribed to influenza, probably in numerous instances rightly so. But there is no doubt that a great tendency has to be guarded against—namely, that which ascribes all kinds of peculiar symptoms to influenza, or which makes any common condition occurring at a time when influenza is prevalent, dependent upon this disease. It is too often lost sight of that the initial malaise in such a condition, for example, as anterior poliomyelitis is put down as an attack of influenza, when under ordinary circumstances, and if influenza were not prevalent, no such explanation would be sought for. That we had amongst us recently an epidemic condition of a most serious kind no one who takes the trouble even to glance at statistics will deny; but we have little doubt that influenza has been invoked as an explanation on numerous occasions when it could more reasonably have been left with its already too great burden. Dr. Mills, in his discussion of the subject, more particularly from the neurologist's point of view, has not, we venture to think, erred on the side of excluding any of the possible manifestations of nervous disorder following or accompanying influenza.

NOTIFICATION AND THE MEDICAL PRACTITIONER.

WE receive from time to time inquiries as to the relations which should exist between medical officers of health and other medical practitioners in the matter of certificates under the Act for the Notification of Infectious Diseases; and we would therefore draw attention to a thoughtful paper on the subject in this month's issue of the *Practitioner* by Dr. Edward T. Wilson of Cheltenham. The paper embodies advice which is in most respects much the same as that which we have given to correspondents from time to time, and it has the advantage of quoting in detail a number of letters which the Local Government Board have addressed to sanitary authorities, health officers, or medical practitioners who have made inquiry on certain definite points. The paper will be useful to many practitioners who are vexed with doubts as to the altered relations which have been brought about by the Act between themselves and medical officers of health.

EFFECTS OF MEDICATED INHALATIONS.

DR. A. IRSAI of Buda-Pesth has made some instructive laboratory observations on the effects of the inhalation of various substances on the lungs and air passages. Almost immediately after a few inhalations of air impregnated with oleum terebinthinæ the lungs became pale, but regained their ordinary appearance on the readmission of pure air; a second administration of turpentine vapour was followed by the same appearances as the first. The cause of the pallor was doubtless a spasmodic contraction of the pulmonary vessels—probably due mainly to peripheral action. When oleum juniperi or oleum pini sylvestris was employed, results of a similar kind, but less in degree, were obtained. Oleum pini sylvestris, however, is a more powerful vaso-motor constrictor than oleum terebinthinæ. With eucalyptus, oleum anisi, oleum menthæ, and menthol scarcely any change was produced in the colour of the lungs. With oleum thymi and thymol three or four inspirations were followed by a distinct reddening, which increased as they were continued. Creasote and, in a still

greater degree, guaiacol produced redness, there being rapid relaxation of the vessels and great hyperæmia of the lungs. From these observations Dr. Irsai concludes that in acute catarrhal affections with swelling, hyperæmia, and profuse secretion, substances should be selected for inhalation which produce anæmia, and that in chronic torpid conditions, or in phthisis where the supply of blood and the nutrition of portions of the lung are defective, substances which induce hyperæmia should be used. Of course it is needful to exercise due vigilance in employing creasote or guaiacol in cases where there is any tendency to hæmorrhage.

NOTIFICATION OF ENTERIC FEVER.

OWING to the system of notification of infectious diseases prompt action has been taken by Mr. Williams, the medical officer of health of Plymouth, to stay the progress of an outbreak of enteric fever which, unknown to the dairyman himself, was being distributed through the agency of his milk. When the matter was investigated strong suspicion was found to attach to the water-supply of the dairy farm whence the milk was derived, although at the time of the inquiry the water was found to be pure in so far as chemical tests were concerned. It was also ascertained later on that just before the occurrence in question a child had died at the farm of enteric fever, and at the date of the inquiry a second person was found to be suffering from the same disease. The precautions taken, including a cessation in the sale of this milk, were followed by an absence of further attacks.

PREVENTIVE DENTISTRY.

THERE are two prophecies current concerning the future of dentistry, writes Mr. Wm. Rushton in the current number of the *British Journal of Dental Science*. One—the optimistic—predicts that in time preventive dentistry (as contrasted with conservative dentistry of to-day) will successfully oppose the many adversaries which now attack the teeth; the other prophecy—the pessimistic—maintains that man will become a recruit to the ranks of the order Edentata, and that future generations will not only be toothless, but hairless and spectacled. In other words, it is held that the dentistry of the future will be the adaptation of mechanical appliances to edentulous mouths. Mr. Rushton, however, thinks that the mean between these two extremes, comes nearest the truth, that the preventive treatment of the future will do much to arrest further deterioration of tooth tissue, but that teeth will never, in highly civilised communities, be brought back to the normal state as found in the skulls of our early forefathers. Much good, he is assured, may be done by more attention being given to the general health, by the teaching of cooking especially amongst the poorer classes, and by the aid of the dental surgeon, whose services are now not alone the privilege of the wealthy, but are fast becoming available for all.

PROPOSED AMENDMENTS OF THE FOOD AND DRUGS ACT.

SOME important changes in the Sale of Food and Drugs Act are embodied in a Bill recently prepared and brought in by Dr. Cameron, Mr. Channing, Mr. Provand, Dr. Farquharson, and Mr. Thomas Dickson. It enacts that the provisions of the Act of 1875 shall apply to and include every wholesale trader or manufacturer of any article of food or drug who shall sell to the prejudice of the purchaser any article which is not of the nature, substance, and quality of the article demanded by such purchaser. The twenty-fifth section shall be amended by the deletion of the word "written" before the words "warranty to that effect"; and every wholesale trader or other person who shall sell to any person any article of food or drug with intent that the same may be resold by retail in the state in which it is purchased from him shall, unless he has in writing informed the purchaser to the contrary, be deemed to have given a warranty to the person purchasing from him that such article is of the nature, substance, and quality demanded by such purchaser. A new section as to margarine provides that it shall be a good defence to prove that the sale was made in conformity with the regulations of the Margarine Act, 1887. With regard to the provisions as to the mixtures of chicory and coffee, the Bill states, it shall be a good defence to prove that, first, where the admixture of chicory does not exceed 50 per cent., that the seller delivered with or on such a mixture a notice by a label, distinctly and legibly written or printed, bearing the words, "This is sold as a mixture of coffee and chicory"; secondly, where the admixture of chicory does not exceed 75 per cent., the words, "This is sold as a mixture of chicory and coffee"; and, thirdly, where the admixture of chicory exceeds 75 per cent., that the seller delivered with or on such a mixture a notice by a label stating the proportion of chicory contained in such mixture.

THE METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.

WHATEVER the merits of provident medical associations, there seems no justification for the indiscriminate offer of their cheap terms to all and sundry persons, without distinction of class and without conditions as to means, income, &c. The instance before us is that of a bill delivered at every house in a road of good houses, including those medical men. There are eight plain reasons given why "you" should join the Hackney Provident Dispensary, one of which is "because whole families may join and insure against the risk of heavy bills which it is often difficult to pay." The wholesale distribution of such literature among the patients of other medical men is an offence to the profession and a demoralising influence to those to whom it is sent. Such a thing as a wage-limit is not suggested, and all and sundry are taught that the very cream of advice and medicine is to be had for sixpence a month.

THE PUNISHMENT OF HABITUAL DRUNKARDS.

The Times gives the following as the departmental committee appointed by the Home Secretary to inquire into the best mode of dealing with habitual drunkards:—Mr. J. L. Wharton, M.P., chairman; Sir Guyer Hunter, M.P.; Mr. E. Leigh Pemberton, Assistant Under-Secretary of the Home Department; Mr. C. S. Murdoch, head of the Criminal Department, Home Office; and Dr. Nicolson, Superintendent of Broadmoor Criminal Lunatic Asylum. In his reference to the committee Mr. Matthews says: "Great difference of opinion has arisen as to what kind and degree of punishment for offences committed by habitual drunkards would be the most effectual, both as a deterrent and with a view to the reformation of such offenders. It appears to me that advantage would result from an inquiry being made into the subject." It will be seen that this inquiry refers only to punishment of habitual drunkards who commit offences. The first meeting of this Committee takes place to-day (Friday), 20th inst., at twelve o'clock.

FOREIGN UNIVERSITY INTELLIGENCE.

Gratz.—Dr. Elschnigg has been officially recognised as *privat docent* in Ophthalmology.

Innsbrück.—Dr. Jarisch has been promoted to the professorship in ordinary of Dermatology and Syphilis.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—

Dr. Christian Wilhelm Ludwig Abel, recently retired from the post of medical officer in command of the Second Prussian Army Corps. He was sixty-six years of age. He served with distinction in the Danish, Austrian, and French wars. He had written a great deal on professional and military medical subjects, and was for a time one of the editors of the *Preussische Militärärztliche Zeitung*.—Dr. E. Mühsam, a well known and much respected Berlin practitioner.

HER ROYAL HIGHNESS PRINCESS CHRISTIAN will write a paper on the work and organisation of the Royal British Nurses' Association, which is to be read in the Women's Section of the Exhibition at Chicago in 1893.

THE Islington vestry have recommended, with regard to the permanent appointment of a medical officer of health for that district, that the salary should commence at £600 a year, and be raised by yearly instalments of £25 to £800.

THE LANCET
Special Analytical Commission
ON
MINERAL WATERS, TEMPERANCE BEVERAGES, &c.

II.—KOP'S ALE.

IN THE LANCET of August 8th, 1891, we published the report of our Special Analytical Commission on an interesting natural mineral water—Johannis. In continuation of the series we now select for investigation a temperance beverage.

Temperance advocates have not been considered in the matter of beverages as they deserve. While they deny to themselves, from various causes, the beverages which appeal to most palates, and which are objectionable to them on the score of containing alcohol, few are available that can be regarded as really good substitutes for beer or other alcoholic liquors. Yet the temperance cause is growing apace, and its ranks are steadily increasing year by year, and to abstainers the urgent question arises, "What shall we drink?" It must be disappointing to the advocates of the cause that the question does not appear to find a satisfactory answer. As a glance down the records of our analytical work during the past few years will show, we have not omitted to give attention to the matter of beverages, and especially to those which claim to be palatable though non-alcoholic, or at least non-intoxicating; but in few instances have we met with a truly satisfactory article, or, at any rate, one which would remain for a time without generating alcohol or deteriorating in some other way. It is really a very difficult thing to prepare a beverage perfectly free from alcohol. Some drinks regarded as non-alcoholic, and for that reason consumed by teetotallers, contain alcohol sometimes equal in amount to ordinary brewers' ale. Thus ginger-beer may easily contain from 1 to 3 per cent., since it is mainly prepared with sugar and yeast. Artificially aerated drinks, of course, such as soda-water, lemonade, and ginger-ale, contain no alcohol; but there is lacking about these an ill-defined "something" which nevertheless contributes largely to fermented liquors that distinctive character and taste for which they are held in esteem. The complicated process of fermentation, quite apart from the alcohol produced or the saccharine substances present, does unquestionably influence in a higher degree than can at present be explained by science, the flavour and character of the final product. If the composition of beer, for example, be imitated by making simply a decoction of hops and adding malt wort or extract to the decoction, and afterwards impregnating with carbonic acid gas, the taste, when compared with the fermented liquor containing precisely the same ingredients, will be found wanting in tone, brightness, and vigour. That fermentation materially softens and tones the character of beverages is a fact which the promoter of the present subject of our inquiry has not lost sight of. The "ale," known as "Kop's" is now so largely consumed by a considerable section of the public, both teetotal and temperate, that we decided a short time since to submit the article to exhaustive examination, and we have now to place on record the results of the numerous analyses subsequently made. Our examination brought many facts to light, and as a consequence we were curious to know how so promising an article was prepared. Our commissioner visited Kop's brewery at Fulham, where everything was laid open to his inspection, and where not a single operation in the whole brewery was allowed to escape his notice, albeit there were many steps in the process of a secret nature. The brewery is a large imposing building covering some three acres of ground, another three acres being devoted to various outbuildings constructed for packing, case making, stabling, &c. The building contains almost exactly the same machinery and plant which are or should be incidental to an ordinary well-appointed brewery. There are the coppers in which the liquor is boiled, coolers, fermenting vats, storage vats, clarifiers, and so on. We may touch very briefly on the more important points in the manufacture before we consider the quality or nature of the final product, as is indicated by the analyses below. Water from two deep artesian wells outside is first pumped up to the top floor of the building into cisterns lined with enamel. The water is run off as required into huge jacketed boilers, where it is boiled with best cane sugar, hops, horehound, and a little ginger. The solution is then passed over a rapid condenser into the fermentation vats, where it is "yeasted" with ordinary brewers' yeast. Fermentation is soon set up and allowed to go on to a certain point, the process at the same time being kept under absolute control by carefully selecting the yeast and by regulating the temperature to a nicety. After being skimmed, the liquor is then run into closed vats, contained in the clarifying department on the same floor. Here, by means of air-pumps, it is put under pressure of a few atmospheres, which suffices to force it through a cylinder packed tightly with a specially prepared kind of cotton fibre. This effects a partial clarification of the liquor and removes all excess of yeast. The liquor then passes on to an ingenious filtering arrangement in which there are some two hundred sheets of ordinary filter paper, and between each sheet is a small metal plate provided with several grooves on the surface; so that the "beer" entering the top end of the filter runs down the first groove between the metal and paper, up the second, down the third, and so on until it reaches the next compartment. Although the beer has to pass, it is stated, through something like a mile and a half of filtering material, the cylinder is not more than three feet long. It is then stored in vats and slightly syruped. The now almost finished liquor next gravitates down to the aerating floor, where, with the best possible description of machinery and by various ingenious devices, the beer is aerated, bottled, and the bottles stoppered. Some sixty hands find constant employment in this department. The beer has but little chance of becoming contaminated with objectionable metals, as nothing but the cleanest copper and block-tin are used. Such is a brief account of the principal operations concerned in the production of Kop's ale. Turning now to the analysis and examination of the products, we may at the outset state that we secured not only samples of the liquor at every stage in the process, but also samples of all the materials used in its preparation. To begin with, our attention was given to the water used in the brewing process. It is obtained from an artesian well a few yards from the main building at a depth of 400 feet. The water is quite bright, has a cool, fresh taste, but possesses no smell. Submitted to analysis, the following results were obtained:—

Free or saline ammonia	0·025	grains per gallon.
Albuminoid ammonia	none	
Chlorine	2·23	"
Nitrogen in nitrates or nitrites	none	
Total solid matter	21·00	"
Temporary hardness ($CaCO_3$)	2·55	"
Permanent hardness ($CaSO_4$)	3·60	"
Total hardness	6·15	"

The water is remarkable for its purity and soft character. Of the total solid matter, which is less by eight grains than the Thames supplies, only 2·55 grains consist

of temporary hardness ($CaCO_3$) and 3·60 grains of permanent ($CaSO_4$) hardness, giving a total hardness equal to only 6·15 grains of lime or magnesium salts per gallon. No sign of organic matter was indicated by the albuminoid ammonia process or by the behaviour of the solids on ignition, or by microscopical examination; the chlorine is also normal—that is, not more than is commonly found in Thames supplies. The water is therefore not only of excellent quality for drinking purposes, but well adapted also for brewing operations. One other noteworthy feature, is the entire absence of nitrates, although the saline ammonia is rather high. We next submitted to analysis a sample of the liquor after fermentation, and the following are the results:—

Absolute alcohol	0·32 per cent. by weight
Equal to absolute alcohol	0·40 „ „ „ volume
Equal to proof spirit	0·70 „ „
Total solid matter	0·134 „ „
Mineral matter	0·029 „ „

The liquor was pleasantly bitter to the taste, turbid, and contained an abundance of healthy yeast cells, traces of sugar, the essential principles of hop, besides certain ill-defined but important products of fermentation. Soluble and insoluble phosphates were found in the mineral matter.

The next sample analysed was taken after the filtering operation. Here, as will be seen, the alcohol, owing probably to a slight loss from evaporation, is further reduced. The total solid matter is of course less, as all excess of yeast has been removed by the admirable filtering apparatus.

Absolute alcohol	0·21 per cent. by weight
Equal to absolute alcohol	0·26 „ „ „ volume
Equal to proof spirit	0·460 „ „
Total solid matter	0·120 „ „
Mineral matter	0·027 „ „

Samples of the liquor before it passes to the ground floor, where it is simply aerated, were next submitted to analysis, and the following results were obtained. The total solid matter is seen to rise to more than 1 per cent. As evidenced by the Fehling test, it consists of inverted sugar, added, however, in the form of pure cane sugar during the finishing process. The alcohol is exactly the same as in the last sample.

Absolute alcohol	0·21 per cent. by weight.
Equal to absolute alcohol	0·26 „ „ „ volume.
Equal to proof spirit	0·46 „ „
Sugar	1·25 „ „
Hop and other extractives	0·12 „ „
Total solid matter	1·37 „ „
Mineral matter	0·027 „ „

Finally, the bottled product, just as it leaves the brewery, was examined, and the following are the results:—

Absolute alcohol	0·32 per cent. by weight.
Equal to absolute alcohol	0·40 „ „ „ volume.
Equal to proof spirit	0·70 „ „
Sugar	1·42 „ „
Hop and other extractives	0·12 „ „
Total solid matter	1·54 „ „
Mineral matter	0·027 „ „

The process of fermentation has been so regulated, it is evident, as to reduce the alcohol to a minimum amount. Strictly speaking, Kop's ale cannot be called absolutely non-alcoholic, although practically it is so; but in view of the exceedingly small quantity it contains, it would be perfectly true to describe it as non-intoxicating. Regarding ordinary ale, to contain, say, 3½ per cent. of absolute alcohol, one would require to drink about ten times more Kop in order to ingest the same amount of alcohol. An average person does not ordinarily drink more than a pint of alcoholic beer on a single occasion, and the amount of alcohol contained therein would represent a gallon and a quarter of Kop's ale according to the above analysis, so that the beverage may fairly lay claim to be absolutely non-intoxicating as regards alcohol.

The beer contained a slight excess of carbonic acid gas, to the extent of from 50 to 70 cc. at 15°C. and normal pressure in each pint bottle, while there remained in every volume of the liquid immediately after opening from 1·1 to 1·2 volumes of gas (CO_2). The gas was perfectly pure, as it was wholly absorbed by potash. It is interesting to add an analysis also of Kop's stout, in that the results, while showing the same amount of alcohol, also give evidence of the presence of malt, which is used in the form of burnt malt for colouring the liquor, just as with ordinary stout. Thus, as the total solid matter is higher, so the mineral constituents are correspondingly increased; they consisted largely of phosphate of potassium.

Absolute alcohol	0·42 per cent. by weight
Equal to absolute alcohol	0·53 „ „ „ volume
Equal to proof spirit	0·93 „ „
Total solid matter	1·67 „ „
Mineral matter	0·04 „ „

It is quite obvious that Kop's ale is not merely, as we at first imagined, a haphazard compound, but rather a carefully brewed product, the preparation of which is based on sound scientific principles. It has a right to the title of a non-intoxicating beverage, and forms an excellent substitute for ordinary ale, which it resembles in taste, colour, appearance, and composition. We must candidly confess that when we first tasted Kop's ale the impression we received was rather unfavourable; but, as with many other articles of diet, its character improves remarkably on acquaintance, and it comes to be really liked. It contains all the valuable volatile as well as the fixed constituents of the hop; and the hops used, as is the case with the other ingredients, are selected, as proved by our examination, from the best kinds. As already suggested, the character of the bitter is soft and delicate, having been toned down doubtless by the process of fermentation. Going through the latter process, too, it is not surprising that the bouquet or, as it is expressively if not elegantly put, "the nose," possessed by the liquid is equal to many kinds of excellent alcoholic beer. Kop's ale affords an excellent and satisfying drink in hot weather; and while it contains all the tonic and refreshing qualities of beer, it can never be accused of stealing a march upon the mental faculties. It keeps well, and, as our examination of samples some months old shows, no appreciable after-fermentation sets up. The public, and especially the teetotal public, may evidently drink Kop's ale with confidence; it contains nothing that is injurious, but is, on the contrary, a salutary and palatable beverage, possessing distinct tonic and stimulating properties by virtue of the choice ingredients which form the bases of its preparation.

MR. BALFOUR ON THE PRESS.

THE anniversary dinner of the Newspaper Press Fund has had many distinguished men as chairmen, who have acquitted themselves on the occasion with more or less felicity. But we doubt if any of them have ever signalised it by a more happily conceived or, in the best of all senses, a more liberal speech than the First Lord of the Treasury at the twenty-ninth recurrence of the symposium on Saturday last. He could not describe himself, as Mr. Disraeli did, when in 1874 he rose to be Prime Minister of England, as "a gentleman of the press," but he humorously admitted that "he had in his time supplied more 'copy' than he thought was either agreeable to the public or agreeable to himself." In the process, however, of supplying this "copy" he had brought himself so intimately into touch with every section and subsection of the body politic—had, in fact, come so closely to identify himself with that body in all its life, inner and outer—as to speak with special authority when he said that "the debt the public owed to the newspaper press of this country was one which it was hardly possible to exaggerate." This tribute he at once explained and justified by the fact that while, alone in Europe, British journalism is anonymous—that while, in other words, its champions in the daily and weekly arena enter the lists with visor down and merge their personality in their cause—it has also the highest standard of responsibility; that it discusses the problems coming up from day to day or from week to week with the most keenly present conviction that the public interest is paramount, and that whatever may be the temporary claims of party, so far as its individual advocacy is concerned, its rallying cry has ever been, "Let all men's good be each man's rule." It is, in fact, the reflex of those representative institutions it has so powerfully contributed to create, insomuch that, conducted in this sense and in this spirit, it has developed, as Mr. Balfour showed, into "at once the freest, the ablest, and the most patriotic press among all the nations of the world."

When Mr. Cobden, in an often-quoted and much-perverted phrase, said that he preferred a single copy of

the leading journal "to all the works"—he meant, of course, the one work—of Thucydides, he was not depreciating the mental power and the unapproachable language of the greatest of historians by comparison with the intelligence and the literary form of a particular number of *The Times* newspaper. He was simply taking that specimen of the journal as an "instantia prærogativa," as Bacon termed it, of nineteenth-century civilisation in its *ensemble*—as the handiest embodiment of the whole intellectual and moral outcome of that which "is wiser than Socrates and wittier than Voltaire—the People"; as, in a word, the fullest expression up to date of "the heir of all the ages, in the foremost files of time"—the English-speaking democracy. Tested by such a criterion, the humblest metropolitan or provincial daily is immeasurably ahead of the finest literary *chef d'œuvre*, ancient or mediæval, that can be adduced; but he would be a poor friend of contemporary civilisation who would read in the fact any other lesson than that of humility, acknowledging as he must that what he so proudly calls his own is his by inheritance infinitely more than by individual effort. As Bacon himself, in the *Novum Organum*, quotes approvingly from Phocion, "when the populace applaud you, ask yourself what fault you have committed," so must we recognise in the press not only a *censor morum*, correcting, refining, and sweetening "our lives from year to year," but a *doctor dubitantium* bringing popular reasoning to the touchstone of daily recurring fact—in the intellectual sphere dispelling illusions or beating down prejudices; in the moral sphere, redressing grievances or reforming abuses—till "from the illumination of many minds on many points truth begins to emerge," and "the thoughts of men are widened by the process of the suns."

Compare the England of the first quarter of the nineteenth century with England as it is in the fast waning days of that century, and let us ask ourselves to what force or forces we are mainly indebted for the mighty advance in all essentials of civilisation so visible around us. The answer can surely be but this—public opinion educating itself by daily recurring contact with fresh actuality; correcting itself by discussion and rediscussion, and, from such vantage ground gradually gained, commanding ever-wider horizons and acquiring juster views under a truer sense of proportion and fitness. And to what instrument does that ever-improving public opinion owe its opportunities and facilities for the advances it continues to make? Chiefly, as Mr Balfour showed, to the press—that all-receptive Dionysius ear which not a sound escapes; that most sensitive of mirrors on which the faintest breath or ripple of thought or emotion is registered for prompt and universal recognition. Not that the ear or mirror is always true, or that consequently the conclusions drawn from their reports are always just. On the contrary, the reverse is far too often the case, and error is apt to be diffused and prejudice fostered by the very means which should be their proper antidote. Imperfection is incident to all things human, and the more complex the instrument or the more complicated the task it is put to, the greater the risk of its getting out of gear and turning out a defective product. But rightly used, the press contains within itself resources for its own correction and improvement, its authority becoming more recognised and more decisive in proportion as its facts are more carefully sifted and its conclusions more impartially drawn—in a word, in proportion as it becomes more scientific.

It is to the educating power of expert, particularly of scientific journalism, that we must look for the perfecting of this great instrument of civilisation. Manifestly the data on which such a specially trained press forms its conclusions are more rigidly guarded, and, *pro tanto*, the conclusions themselves are logically sounder than is possible in the vaguer, more loosely organised sphere of general politico-social discussion. Take any controverted matter in which the medical journalist, for example, has to join issue with his political compeer, and compare the precision of the criteria the former appeals to with the fluctuating standards set before the latter. We could, in point, adduce instance upon instance of the disadvantage under which the general journalist labours from his unfamiliarity with scientific processes or his ignorance of the value to be given to conflicting groups of data. He reasons rightly enough, for, as Cardinal Newman has lucidly shown, there are more false facts in the world than false deductions from them; but he has had to accept, with inadequate sifting, the materials of his induction and the inept and unconvincing result is all too apparent. Indeed, the action of the non-scientific press is responsible for the propagation of much that is unsound, and, when it affects legislation, positively mischievous. Within the last year or two we have seen tentative and but partially divulged proposals in therapeutics eagerly caught up by the non-professional press, a popular *furore* set on foot, the hand of the discoverer forced, and a premature application of his method put in practice, with the inevitable results of failure, disappointment, and the scepticism of reaction. Well might Koch contrast the conditions under which Jenner worked out his salutary innovation with those meted out to him when on the threshold of his own. The eighteenth-century pathologist worked in an atmosphere of non-publicity; he had ample leisure to test his plan, to subject it to every possible experiment, and to have it thoroughly matured and guaranteed against failure before submitting it to the world. His nineteenth-century counterpart had barely indicated the first lines of his proposals when they were seized upon by a sensation-mongering press, and so manipulated before the public that in self-defence, as a humanitarian, as well as a scientist, as he had to give them forth when ill-prepared for clinical application, till the gratitude prematurely showered upon him changed rapidly into a tempest of disparagement, if not obloquy, under which he retired to the seclusion of his laboratory, determined to let nothing escape him till it was ripe for professional appreciation and use. Such and similar experiences will inevitably leave their impression on the public, till it gradually gets educated up to the standard set before it by scientific or expert journalism, and the intrusion of the non-professional newspaper into fields altogether alien to it becomes a thing of the past. The reforms in which THE LANCET, when it did not actually initiate them, had so prominent a share were those in which it could speak with the authority inseparable from scientific vantage ground and professional prestige. Its memorable crusade against food adulteration—to instance one out of many—could never have been carried out to its issue in salutary legislation but for its appeal to the findings of the chemical analyst and its readiness to submit its charges to the test of the laboratory. The standard of journalistic integrity it thus set up is what, when more widely diffused and more practically complied with, must correct the besetting sin so delicately glanced at in Mr. Balfour's address to his audience of publicists. The non-acceptance of statements till thoroughly sifted and verified, the suspension of judgment till the facts on which it must form itself are fully and impartially before it, the apportionment of praise or blame in accordance with the precept of the Apostle—ἀληθεύειν ἐν ἀγαπῃ—such are among the conditions by which the press will make its power more and more beneficially felt and minimise the evils whereby that power has not seldom been impaired.

THE ELECTRIC LIGHT IN MEDICINE

THE death was recently announced from Vienna of Josef Leiter, the well-known instrument maker of that city. The event recalls a stormy controversy, by which some years ago the attention of physicians and surgeons was directed to the gradual evolution of expedients for illuminating the less accessible of the body cavities. The movement had its commencement with the century, and attained its full development with the production of Leiter's cystoscope in 1887. The possibility of throwing light into the bladder was first conceived by Bozzini, who in 1805 exhibited his "light conductor." The contrivance failed to hold its ground, but the idea survived. In 1845 Mr. Avery, of Charing cross Hospital, constructed a bladder speculum, in which the light was derived first from candles and afterwards from a benzene lamp. In 1853 Désormeaux laid the first recognised endoscope before the Paris Academy of Medicine, and within a few years the project was taken up and many notable improvements effected by Cruise of Dublin and by many others, both in this country and abroad. The introduction of the electric light, as was

natural, gave a fresh impulse to invention, and marks an entirely new departure. It became possible, in theory, to dispense with the reflector and to substitute for the external lamp a source of direct illumination. At a very early period Schramm of Dresden devised his diaphanoscope. This was a lamp carrying a platinum loop at white heat. It was introduced into the uterus, and its object was to make the condition of the ovaries visible through the abdominal walls. Julius Bruck, a dentist of Breslau, enjoys the credit of having first employed the platinum loop in medicine. He had been an assistant to Schramm, and may possibly have borrowed the idea. In 1867 Bruck exhibited a stomatoscope which obtained some notoriety, and later a diaphanoscope for examining the rectum and bladder. These were quickly followed by Trouvé's polyscope, and Hedinger's ear speculum. The principle of all these instruments was the same. A loop of glowing platinum was enclosed in a small glass bulb, and the great heat generated was controlled by a surrounding cylinder of flowing water. The apparatus was necessarily cumbersome, and unceasing efforts were made to simplify it. In 1876 Dr. Nitze projected an instrument for illuminating the bladder, urethra, and larynx. He entrusted its execution to Deicke of Dresden, the lenses and prisms being executed by Bé èske of Berlin. From their joint labours resulted the Nitze-Deicke endoscope. This proving unsatisfactory, Nitze next had recourse to Leiter. The constructive skill of the latter triumphed over the difficulties and the Nitze-Leiter cystoscope acquired a world-wide renown. Differences ensued between Nitze and Leiter, and their rival claims have not quite been settled. Leiter, now working alone, continued to effect further improvements in the cystoscope, and the perfection by Swan and Edison of the incandescent lamp found him ready to adopt the enormous advantage which it offered him. There was no longer need of the circulating stream of water. The instrument was simplified in many ways, and Leiter's cystoscope, when it appeared in 1887, was pronounced by competent authority to be the realisation of a century's dream. Shortly before the death of the instrument-maker Dr. Lewandowski published an admirable work upon "The Electric Light in Medicine," and he accorded a graceful tribute to Leiter's zeal and ingenuity. Leiter's name has become a household word of medicine in connexion with the tubes which are used in every hospital for the control of surface temperatures. It is another instance of the fact so often illustrated that to supply the commonest wants confers the widest and most lasting distinction. Beyond this, however, the Austrian instrument maker has a claim to the gratitude of science founded upon the distinguished part he played in promoting some of the most notable advances of a progressive age.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 7015 births and 3987 deaths were registered during the week ending May 14th. The annual rate of mortality in these towns, which had declined in the preceding three weeks from 21·8 to 19·7 per 1000, rose again last week to 20·4. In London the rate was 19·5 per 1000, while it averaged 21·0 in the thirty-two provincial towns. The lowest rates in these towns were 12·8 in Croydon, 13·0 in West Ham, 13·7 in Portsmouth, and 15·0 in Nottingham; the highest rates were 25·0 in Sheffield, 26·4 in Blackburn, 26·8 in Preston, and 28·1 in Wolverhampton. The 3987 deaths included 538 which were referred to the principal zymotic diseases, against 527 and 541 in the preceding two weeks; of these, 222 resulted from measles, 160 from whooping-cough, 58 from scarlet fever, 38 from diphtheria, 36 from diarrhœa, 20 from "fever" (principally enteric), and 4 from small-pox. No fatal cases of any of these diseases occurred last week in Gateshead; in the other towns they caused the lowest rates in Brighton, Norwich, Leeds, and Newcastle-upon-Tyne, and the highest rates in Manchester, Sunderland, Birkenhead, and Preston. The greatest mortality from measles occurred in Birkenhead, Manchester, London, Leicester, Liverpool, and Birmingham; from scarlet fever in Huddersfield, Cardiff, and Preston; from whooping-cough in Hull, Blackburn, Preston, Derby, Salford, Sunderland, and Birkenhead; from "fever" in Plymouth; and from diarrhœa in Preston. The 38 deaths from diphtheria included 24 in London, 2 in Cardiff, 2 in Birmingham, and 2 in Nottingham. Three fatal cases of small-pox were registered in London, and one in Liverpool, but not one in any other of the thirty-three large towns; 73 cases of this disease were under treatment in the Metropolitan Asylum Hospitals, and 13 in the Highgate Small-pox Hospital, on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1592, against 1408 and 1484 on the preceding two Saturdays; 232 new cases were admitted during the week, against 177 and 200 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 389 to 297 in the preceding three weeks, rose again to 304 last week, but were 40 below the corrected average. The causes of 67, or 1·7 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Cardiff, Oldham, Newcastle-upon-Tyne, and in twelve other smaller towns; the largest proportions of uncertified deaths were recorded in West Ham, Birmingham, Nottingham, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·3 and 21·4 per 1000 in the preceding two weeks, further rose to 22·8 during the week ending May 14th, and exceeded by 2·4 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·4 in Leith and 14·9 in Greenock to 22·3 in Perth and 27·6 in Glasgow. The 635 deaths in these towns included 32 which were referred to measles, 24 to whooping-cough, 8 to "fever," 8 to diarrhœa, 6 to diphtheria, 2 to scarlet fever, and not one to small-pox. In all, 80 deaths resulted from these principal zymotic diseases, against 70 and 65 in the preceding two weeks. These 80 deaths were equal to an annual rate of 2·9 per 1000, which almost corresponded with the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had increased in the preceding three weeks from 15 to 22, further rose last week to 32, of which 31 occurred in Glasgow. The deaths referred to whooping-cough, which had risen from 22 to 30 in the previous three weeks, declined to 24 last week, and included 14 in Glasgow, 4 in Aberdeen, and 3 in Edinburgh. The 8 fatal cases of "fever" exceeded those recorded in any recent week, and included 5 in Dundee. The deaths from diphtheria, which had declined from 10 to 1 in the preceding four weeks, rose again to 6 last week, of which 2 occurred in Glasgow and 2 in Greenock. The 2 fatal cases of scarlet fever were recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had declined in the preceding three weeks from 163 to 126, rose again last week to 140, and were within one of the number in the corresponding week of last year. The causes of 67, or nearly 11 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 43·9 and 33·0 per 1000 in the preceding two weeks, further declined to 31·0 during the week ending May 14th. During the first six weeks of the current quarter the death-rate in the city averaged 34·6 per 1000, against 20·1 in London and 19·8 in Edinburgh. The 208 deaths in Dublin during the week under notice showed a decline of 13 from the number in the preceding week, and included 24 which were referred to measles, 3 to whooping-cough, 1 to "fever," 1 to diarrhœa, and not one either to small-pox, scarlet fever, or diphtheria. In all, 29 deaths resulted from these principal zymotic diseases, equal to an annual rate of 4·3 per 1000, the zymotic death-rate during the same period being 3·3 in London and 1·2 in Edinburgh. The fatal cases of measles, which had been 20 and 40 in the preceding two weeks, declined again to 24 last week. The deaths referred to whooping-cough, which had been 11 and 4 in the previous two weeks, further declined to 3 last week. The 208 deaths registered in Dublin last week included 36 of infants under one year of age, and 37 of persons aged upwards of sixty years; the deaths of infants showed a slight decline, while those of elderly persons corresponded

with the number in the preceding week. Eight inquest cases and 6 deaths from violence were registered; and 61, or nearly one-third, of the deaths occurred in public institutions. The causes of 23, or more than 11 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

HOW GENERAL GORDON WAS REALLY LOST.

Surgeon-Captain T. H. Parke has a paper in the *Nineteenth Century* for the present month on this subject. He gives a brief but interesting, sketch of the stirring military events which occurred in Egypt from October, 1884, to the end of January, 1885. Khartoum fell on Jan. 26th. All that was required was, as the ill-fated hero had himself again and again pointed out, to let the enemy see by the presence of a few British soldiers that the long-promised relief was not all a delusion. The failure of the relief expedition is attributed by our author to delays at Metemmah, which was reached in sufficient time for the object of the expedition to have been effected. If a steamer had left Metemmah for Khartoum on the afternoon of the 21st she could have relieved Gordon on the 25th, and the fall of Khartoum would not have gone down to posterity as one of the blots of British history. The paper, apart from the light which it throws on the history and causes of that deplorable event, is interesting from the information it gives of the medical and surgical occurrences of the expedition.

DUBLIN BARRACKS BILL.

Mr. Brodrick has been elected Chairman of the Select Committee of the House of Commons to consider the Dublin Barracks Bill. The members, in addition to the Under Secretary for War, are: Sir Edward Hamley, Mr. Barton, Mr. T. M. Healy, and Dr. Farquharson. The Bill is "to enable the Secretary of State for the War Department to purchase certain lands in or near Dublin for the improvement of the Wellington and Beggar's Bush Barracks at Dublin."

Fleet Surgeon Patrick Keelan, R.N., M.D., F.R.C.S.I., who died on the 9th inst., at Craigmore, Holderness-road, Hull, became Surgeon in the Navy in March, 1859, Staff Surgeon in December, 1870, Fleet Surgeon in October, 1880, and retired in January, 1882.

ARMY MEDICAL STAFF.—Surgeon-Captain H. E. Dowse, Madras Command, has been transferred to the Rawul Pindi District; Surgeon-Captain B. J. Inniss has been posted for duty at the Station Hospital, Bangalore; Surgeon-Major J. T. Goggin has been appointed to the charge of the Station Hospital, Nusseerabad, Bombay Command.—The undermentioned Officers, on arrival from England, have been posted for duty as follows, in the Bombay Command:—Surgeon-Captain C. A. P. Mitchell, to Poona; Surgeon-Captain C. Birt, to Bombay, for Aden; Surgeon-Captain J. D. Day, to Bombay.—The following Officers have arrived in India for duty: Surgeon-Captains M. F. Macnamara, T. O. H. Hamilton, H. J. Barrett, and E. M. Williams.—Surgeon-Lieutenants J. D. Alexander and C. B. Lawson have been posted to the Station Hospital, Western Heights, Dover; Surgeon-Captain J. J. C. Watson to the Second Station Hospital, Aldershot, for duty.—The undermentioned Surgeon-Lieutenant-Colonels retire on retired pay (dated May 18th, 1892):—Charles Edward Dwyer and William Cameron Grant, M.B.

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon-Captain G. W. Murphy, M.B., to be Surgeon-Major (dated May 18th, 1892).

NAVAL MEDICAL SERVICE.—Deputy Inspector-General of Hospitals and Fleets Adam Brunton Messer, M.D., has been promoted to the rank of Inspector-General of Hospitals and Fleets in Her Majesty's Fleet (dated April 27th, 1892).—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Surgeon Geo. Lowbridge Baker has been placed on the Retired List of his rank (dated May 12th, 1892).—The following qualified candidates for the Naval Medical Service have been appointed Surgeons in Her Majesty's Fleet:—Samuel Ingleby Oddie, M.B., Henry Baker Hall, M.B., Henry William Gordon Green, Thomas Edward Honey, M.D. Edward Butler Pickthorn, George Thompson Bishop, Edgar Fairbank Mortimer, Beauchamp Fredk. Parish, Frederick Albert Capps, and Charles Frank Warren (all dated May 11th, 1892).—The following appointments have been made at the Admiralty:—Fleet Surgeons: Robert Grant, M.A., M.B., to the Portsmouth Division Royal Marines (dated May 15th, 1892); George Maclean, M.A., B.A., to the *Royal Sovereign* (dated May 31st, 1892). Staff Surgeons: W. G. Jack to the *Bellona*, Charles E. Geoghegan to the *Audacious*, and Samuel Keys to the *Porpoise* (all dated May 18th, 1892); Standish F. O'Grady to the *Ganges* (dated May 19th, 1892). Surgeons: B. R. Clarke to the *Triton*, W. Eames to the *Wildfire*, F. W. Collingwood to the *Vivid* (additional), and William W. Jacobs to the *Royal Sovereign* (all dated May 31st, 1892).

VOLUNTEER CORPS.—*Artillery:* 3rd Durham (Western Division, Royal Artillery): John Macdonald, M.B., to be Surgeon-Lieutenant (dated May 14th, 1892).—*Rifles:* 6th Middlesex (St. George's): Surgeon-Lieutenant F. E. Fenton to be Surgeon-Captain (dated May 14th, 1892).

Correspondence.

"Audi alteram partem."

IDENTIFICATION OF TUBERCLE BACILLI IN SPUTUM BY A NEW AND SIMPLIFIED PROCESS.

To the Editors of THE LANCET.

SIRS,—Since the discovery of the tubercle bacillus every year has furnished forth one or more methods of demonstrating it, and about twenty methods are before the public at the present day. My only reason for adding further to this number is the simplicity of my procedure. In order to distinguish the bacillus of tubercle from others existing in sputum, or in tissues, it is usual to employ acids as decolourising agents. I have found, however, that whereas most bacteria lose the stain very rapidly in boiling water, the tubercle bacillus retains it for a much longer period, sometimes over five minutes.

The following is my process:—The sputum is dried and fixed on a cover glass, and stained with hot carbol fuchsin in the usual manner. The cover glass is then moved to and fro in water at a temperature between 208° and 212° F. during one and a half to three minutes, one minute often sufficing. The specimen may now be mounted either in water and examined microscopically, or may be subjected to any double staining process which may seem necessary. In order to obtain good results the film must be as thin as possible, and evenly distributed, as otherwise any little lumps which may exist will retain the colouring matter even longer than the tubercle bacilli. Sometimes the decoloration of the bacilli, from causes unknown to me, takes place more rapidly than usual, and therefore it is best to continue the process only until the cover glass presents a faint rosy gleam. This method is probably not applicable to the examination of tissues on account of the coagulation and imbibition that it produces. On the other hand, the method may be most successfully employed for the identification of the lepra bacillus. I hope later to be able to give further information on this subject. The results obtained are not quite so perfect as those produced by some other methods, and I bring forward the hot-water process, not as a laboratory method, but one for use at the bedside, and the object of my communication will have been fully realised if I have brought before the general practitioner a method by which he may easily and rapidly determine the presence or absence of the tubercle bacillus.—I am, Sirs, yours truly,

Cairo, May, 1892. P. KAUFMANN.

*** The great advantage of this method, if it answers as well or nearly as well as the methods now in use, is its simplicity, as boiling water may often be obtained when acids are not to hand. There is, however, another possible advantage. The water will not continue to act when it is cooled, and in all probability the staining will remain more permanent than where acid is used, as this, unless very carefully removed or neutralised, continues to decolorise even after the specimen is mounted.—ED. L.

INCREASE OF SMALL-POX.

To the Editors of THE LANCET.

SIRS,—As you will probably call attention to the increased number of cases of small-pox notified in this district during the past week, I would take this opportunity of stating briefly some facts in connexion therewith. At the end of February and beginning of March a number of cases occurred, and were all traced to a girl whom it was found had suffered from small-pox some few weeks previously, and who had not been under medical treatment except on one occasion in the early stage of the disease, before its distinctive characters were sufficiently clear to enable the medical man to make a correct diagnosis. From this girl, as a source of infection, I have been able to trace upwards of forty other cases. On the immediate isolation of all cases discovered the outbreak seemed to subside, but ten days ago another batch of cases occurred, and have been traced to a case similar in many respects to the first, except that in the second girl's case no medical man had been consulted at all, and the girl was found to have been suffering for three or four weeks in a tenement house containing forty adults and seventy children, twenty of whom were unvaccinated. Several interesting questions have been raised in connexion with both outbreaks, but I would at present draw attention to two. First is the difficulty existing in a neighbourhood containing very poor persons who do not call in the help of any medical man, not even the parish medical officer, in time of sickness, unless it interferes with the ability to work, or is likely to be dangerous to the individual. In both outbreaks it was necessary, in order to detect fresh cases, to visit daily the families living in houses adjoining those in which small-pox had appeared; by this means were the original cases discovered. That it is possible for cases of small-pox to exist for weeks hidden in a district is a condition of things dangerous not to the district only, but to the whole of London, and does not appear to have been taken into account in the Public Health Act; the only way to deal with it seems to be in a regular house-to-house visitation, by the medical officer of health examining every person; but before his suspicions are aroused a case may have existed sufficiently long to infect a widespread area.

A second matter which has been forcibly brought under my notice is the difficulty of obtaining speedy isolation of suspicious cases. The Metropolitan Asylums Board have no power to make provision for cases of this description, and several persons have had to remain in tenement houses until the disease was sufficiently distinct to enable the medical attendant to come to a decision as to the nature of the disease. Some of these suspicious cases in houses in which small-pox had occurred turned out not to be small-pox; but this was not so in regard to the majority, who in the meantime were acting as sources of infection. There should be some provision made for placing in quarantine cases of this description, as the absence of such interferes to a great extent with the endeavours of the local authority to prevent the spread of the disease; there is need, moreover, for some consolidation of authorities in regard to small-pox prevention, for at present there are more or less concerned therein no less than five bodies—viz., the Local Government Board, the County Council, the vestry or local board, the Metropolitan Asylums Board, and the guardians.—I am, Sirs, yours faithfully,

FRANCIS J. ALLAN,
Medical Officer of Health, St. Leonard, Shoreditch.

May 17th, 1892.

THE HURDWAR FAIR AND CHOLERA.

To the Editors of THE LANCET.

SIRS,—The telegraphic news from India in *The Times* of the 16th inst. regarding the correspondence in the native press of the north-west provinces relating to the dispersion of the pilgrims at the Hurdwar fair owing to cholera is of far greater importance to the public health of India—and, indeed, the world—than we are apt to suppose; and on this account I trust you will kindly insert this letter. I have had opportunities—unequalled, I believe, by any other medical officer in India—of judging of the effects of this vast concourse of human beings, collected at the worst time of the year, in the place least suited for it, and themselves in a condition most unfitted to resist the fatal influences inseparable from these gatherings, and I can unhesitatingly state that the condition of Hurdwar and the roads leading from it in 1867 and 1879 was a disgrace to any Government, and infinitely more so to one which had an apparently fully equipped sanitary department. For weeks before the Hurdwar Fair the district arrangements of Saharanpur (that in which Hurdwar is situated) were completely upset, and to end in both years, as I know, in the unutterable failure witnessed at Hurdwar on April 13th in 1867 and 1879 would, one would have supposed, have been ample proof that something was necessary to prevent the recurrence of what seemed so impossible to prevent by local sanitation. But, no; the horrors of 1867 were repeated and intensified in 1879. I am, therefore, truly thankful to see that the Government have felt compelled to take the action they have done on the score of public health. Without doubt our annual treatment of the vast crowds which meet at Hurdwar on April 12th each year is enough to make the continental sanitarians put us out of court altogether in the matter of the spread of cholera, and the scenes enacted and repeated each year at Hurdwar for twenty years, as I know from 1864, were such as would never have been tolerated for one year in this country. In the absence of details of the present correspondence I will add no more, except to remark that it is little wonder to me that the sanitary authorities of the continent of Europe view with alarm much that we do with reference to the treatment of cholera outbreaks, after vast gatherings like those at Hurdwar, and hesitate to give us too free a hand on account of our vastly greater commercial intercourse.

I am, Sirs, yours truly,
ROBERT PRINGLE, M.D., Brigade-Surgeon.

Blackheath, S.E., May 17th, 1892.

INTESTINAL OBSTRUCTION.

To the Editors of THE LANCET.

SIRS,—In the report of a case of intestinal obstruction under Dr. Cousins, it is noted that the coil of intestine was blue, showing where it had been constricted. In examining the abdomen after fatal results of herniotomy, I have frequently noticed this condition, with an entire absence of other signs of general peritonitis, even when the period between the time of relief and death was sufficiently long to allow signs of peritonitis to develop. I have further seen in such cases that the discoloured coil lies at a distance from the part of the abdomen where it was constricted, and that the patient passed flatus before death. The explanation suggested is that the septic material penetrates the damaged wall of the intestine, intestinal movements spreading the material over a wide area. The natural inference to be drawn is that in cases of herniotomy where the condition of the gut is doubtful, opium ought to be administered early in full doses.—I am, Sirs, yours truly,

WILLIAM HORROCKS, F.R.C.S.Eng.

Bradford, Yorks, May 16th, 1892.

THE PHYSIOLOGY OF DREAMS.

To the Editors of THE LANCET.

SIRS,—Will you allow me also to express how interested I was not only in your annotation on Dr. Richardson's lecture at the Royal Institution, but also in Dr. Wilks's letter in your issue of to-day? I also was not present at the lecture, but hope to see it in the forthcoming number of the *Asclepiad*. The *Daily Telegraph*, in a leading article on what Dr. Richardson said, quotes him as stating that "all musical instruments dream after they have ceased playing, and a microphone will detect their dreams." This, to my mind, is a beautiful and pithy way of expressing the science and secret of dreams. The dreams of musical instruments can be proved by the tuning fork, the piano, the organ, or the violin, both by the detection of vibration set up by and lasting after actual playing, and from unobserved causes. These unobserved causes may be jolts and jars, wind, varying degrees of tension from temperature or atmospheric pressure, electrical currents, rusting or chemical action, friction from dust and insects, or even animals like mice. If instruments were possessed of minds they would dream these sounds and sighing vibrations in the periods of

rest between the real times. An impartial *résumé* of the many theories of dreams is given by Dr Sully in the article on "Dreams" in the *Encyclopædia Britannica*, and also in the work on "Illusions" (International Science Series) by the same author. I may here say that the physiological theory there given completely accounts for all the phenomena of dreams except their visual aspect, or what Wundt calls "the light chaos." In your second volume for 1889 I suggested that the visual aspect was due to actual light being more or less perceived by the intellect during the sleeping state. That there is actual light developed in the body at all times is certain from the physical transformations of energy taking place, and from the presence of phosphorised fats, whether in the blood-corpuscles, nerve tissue, or brain substance. The chemistry of these phosphorised fats, which is very complex, can be studied in Dr. Thudichum's "Physiological Chemistry of the Brain," and also in a most interesting address on the cerebro-spinal system in the last number of the *Asclepiad*. Dr. Sully describes a dream he once experienced after trying to fall asleep by counting. The numbers took on visual form, and he saw them coming in endless procession, knocking and jostling against each other in most grotesque and comical fashion. Were these blood-corpuscles actually seen and mistaken for the numbers with which the mind had been engaged a moment previously?

I am, Sirs, yours faithfully,

Plumstead, May 11th, 1892. FRANCIS EDWARD CANE.

THE ASSOCIATION OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS.

To the Editors of THE LANCET.

SIRS,—Mr. W. G. Dickinson, in his letter published in your issue of the 14th inst., employs an expression "took offence" which, as applied to myself, scarcely meets the case. Will you therefore permit me to say that in my letter of resignation, dated April 15th, I stated that "I declined to forward to *any* professional man so insulting a communication" as that passed, in the unavoidable absence of both Dr. Steele and myself, on April 12th, and received by me for transmission to the solicitor on April 14th? This was one of my two immediate reasons, and I should again decline to forward, for any body of men, to any professional man a resolution that he be "forthwith informed that his services are no longer required." How would Mr. Dickinson regard such a proposal if the gentleman whose "services were no longer required" were himself and the dismisser a patient? Moreover, as to the plea of the committee's "desiring to ascertain the extent of their liability as soon as possible," they had already, at a meeting at which the solicitor was present, on April 6th—i.e., only six days previously—requested him to forward his bill of costs to one of themselves as soon as feasible, and did not then breathe a word as to this prospective curt dismissal. Declining, therefore, to forward the resolution of April 12th, my resignation followed as a matter of course; for I did not wish the committee to be placed in the painful position of having to deal with a rebellious secretary. My other decisive reason, which I also stated in my letter of resignation, was that I strongly objected to the manner in which the Association's Minute-book had been obtained and subsequently withheld from its lawful custodian, myself, the acting secretary.

With regard to the resignation of my colleague, Dr. Steele, I hear from him that the grounds stated by Mr. Dickinson formed but a portion of the reasons which influenced Dr. Steele in forming his decision, although anxious to assist the committee in any possible way, and that he likewise declined to forward to the solicitor the resolution above referred to. Mr. Tait was naturally informed by me of the above chapter of events, and this is probably one, but by no means the "sum total," of the matters to which he alludes; though neither the solicitor, nor my co-secretary, nor myself was aware of his intention to write you, until, in common with all your readers, we saw his letter in your columns of the 7th inst. It is no doubt a compliment to Mr. Lawson Tait that his "advice" should be considered by Mr. Dickinson to have outweighed the better judgment of the rest of the Committee, but it now appears to be met by them with a recognition as marked as that shown to their other advisers.

Mr. Dickinson now having publicly occupied himself with the question of the recent changes in the officering of the Association, perhaps he will go a little further and induce the Central Committee to assemble and officially receive the month-old resignation of two honorary secretaries who have served that body for over seven years.

I am, Sirs, your obedient servant,

W. A. ELLIS.
Late Honorary Secretary of the Association of Members of the Royal College of Surgeons of England.

May 18th, 1892.

THE NEW CURRICULUM AND THE SCALE OF FEES.

To the Editors of THE LANCET.

SIRS,—Rumour has many tongues, and not all of them are truthful. It would be interesting to know what truth there is in the rumour that when the new prospectuses of the eleven London schools for the coming session are issued it will be found that there is the same wretched underbidding of each other in the matter of fees for medical education as in the years gone by. We all know that in view of the five years' curriculum there have been meetings of the deans to consider the question of fees, and that there has been a widespread feeling that the opportunity should not be lost of raising the London fees to something like an adequate sum, and at the same time also of putting the fees of all the schools on an equal footing. Is it true, however—is it possible—that this excellent scheme has been frustrated by the action of one of the smaller schools, by one which surely ought to have known better, by independently and, it is said, irrevocably fixing its new scale of fees at a contemptibly small increase upon that of last year; that others of the smaller schools feel it in the circumstances impossible to raise their fees to the sum which they had wished, and which had been advocated and will be adopted by the large schools; and that yet others of the schools are even descending still lower, and are proposing an addition to their fees, already too low, which is simply ridiculous? I name no names and no amounts, but if rumour be true we shall have three various and unmeaning scales of fees in force at our eleven London schools, instead of one and the same at all of them, for which many had wished, and for the consummation of which a unique opportunity had at length arisen. Is it too late even now for the deans to arrange and finally settle that we, the constituents of the one great school of medicine in London, shall act together and in unison, that we shall raise the fees for medical education to a scale somewhat commensurate with those of other professions, and that an era shall be begun when the various schools will show that they individually seek to attract students by the quality of their teaching, rather than by the deplorable system of underbidding which to many of us is disgusting in the last degree?

I am, Sirs, yours faithfully,

May 11th, 1892. OLIM DECANUS.

DEATH UNDER CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—A case of death under the influence of chloroform having unfortunately occurred here, I think it right to report it. A boy aged eleven years was recommended to have adenoid growths removed from his naso-pharynx. He was a pale, anæmic child, with no disease of lungs or heart. He had been told to have nothing to eat after his breakfast at 7.30 A.M. on the 14th ult. (being an out-patient); and at 1.15 P.M. I was asked to give chloroform. He took it slowly, not breathing well, but with no difficulty or struggling. His pupils being slightly contracted, and the cornea insensitive, the operation for removal of the growths, by Loënberg's forceps, was commenced. There was not much hæmorrhage or coughing, and the operation was just finished. While sponging out the pharynx, however, the respiration was noticed to stop for a second, but commenced again, there being slight cyanosis about the eyes, though the lips remained of good colour. The gag was at once removed. The pulse was imperceptible. On auscultating the chest no heart sounds were audible, though the breath sounds could be well heard and air was entering

freely. Steps were at once taken to stimulate the heart—amyl nitrite inhalation, injection of ether hypodermically—and hot towels were applied to epigastrium and head. Partial inversion of the child was tried, and artificial respiration was continued for three-quarters of an hour. The breathing having ceased some minutes after stoppage of the pulse, the child gave only one or two short gasps and showed no more signs of life. The chloroform used was that manufactured by Macfarlan and Co., and the quantity given was only two drachms, the administration having lasted but from five to ten minutes. The portion remaining in the bottle has been sent to Professor Ramsay, of University College, for analysis. My colleague, Mr. H. G. G. Cook, the house surgeon, performed the operation. An inquest was held, and the jury returned a verdict of "Accidental death from syncope during the administration of chloroform." Unfortunately a post mortem examination was not obtained, the coroner not having ordered it to be performed.

I am, Sirs, yours truly,

R. C. M. COLVIN SMITH, M.B., B.C. Cantab.

Victoria Hospital, Chelsea, May 18th, 1892.

THE INTERIM REPORT OF THE VACCINATION COMMISSION.

To the Editors of THE LANCET.

SIRS,—The fifth report of the Vaccination Commission must have come as a thunderclap to those public vaccinators who have not been watching the course of events. One of your daily contemporaries to-day in a short leader says:—"The conduct of the Local Government Board in reference to this matter has not been wise, in advising boards of guardians after a fashion very similar to the recommendation now made by the Royal Commission." In regard to vaccination, the Local Government Board and the public represent the devil and the deep sea. I have been a public vaccinator for a number of years, and formerly earned a respectable sum in fees and grants. I was then vaccinating by three insertions, and in every way satisfied the requirements as to the area of foveation. A few years ago I was directed to make four insertions. After representing the inevitable result, I complied. The attendance at most of the stations has fallen off, and my principal one is nearly deserted for the surgery of the private practitioner who will vaccinate in two places, or even in one. If the object of the Local Government Board was to obtain more efficient vaccination, it has utterly defeated itself, as many parents, in addition to those who paid for scanty insertions, decided against the operation altogether, and no prosecutions followed.

The Local Government Board ought to have obtained an Act of Parliament requiring every certificate to state that four insertions of lymph had been made, and then they might have begun with the public vaccinators. In the present political situation they were too wise, no doubt, to attempt such a task.

I am, Sirs, yours faithfully,

May 12th, 1892. PUBLIC VACCINATOR.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY, LIMITED.

To the Editors of THE LANCET.

SIRS,—One of the greatest legal hardships affecting medical men is, that any pauper can issue a writ on the most trifling of pretexts, and so put not only one of us, but any one, to great expense. Even a man with some means can harass a medical man with proceedings, bringing a case to the verge of trial, and then, by paying some £30 or £40, withdrawing it, probably costing the unfortunate doctor one to two hundred pounds for unrecoverable costs. Combination has several advantages: First, a protection society places, through its organisation, at the command of any medical man, for a payment of 10s. a year, a staff of skilled experts, used to dealing with all kinds of cases of difficulty, whether legal, surgical, or medical, likely to arise in the practice of his profession. Such a society reduces to a minimum the enormous expense and inconvenience caused to a man who has to leave his business and work up his defence properly. Secondly, by the society at once offering to receive on his behalf the threatened process and entering an appearance, and preliminarily investigating the matter, the doctor concerned is saved great expense and anxiety. Thirdly, the mere receipt of an official letter in reply to the threat of proceedings in blackmailing cases (which are more frequently of occurrence than would be imagined) generally prevents further action being taken. The blackmailer seeks to isolate and terrify his intended victim; and the facts that he has taken counsel with others, and that the would-be blackmailer finds that he has to deal, not with one person, but with a powerful association, like the Medical Protection Society, having its head-quarters in London, and associated with some of the most eminent London and provincial practitioners, are almost certain to make the attacker stop proceedings.

I have seen great evils arise from cases being tried in country towns. I hope our council will decide, whenever it is possible, to have country cases in which our society is interested dealt with in the London Courts, where the attendance of experts would be easy to obtain, and, what is most important, all local influence and feeling would be excluded. Starving the defence is a very bad policy; that error, I am sure, our council will not fall into. In one case within my cognisance a respected practitioner, owing to these two causes—local prejudice and the absence of experts,—was mulcted in costs &c. amounting to nearly £600. I am sure that had the case been tried in London the action would either have been abandoned or decided very differently.

I am, Sirs, yours very faithfully,

May 16th, 1892. GEO. B. MEAD, Hon. Sec.

THE TREATMENT OF THE NASO-PHARYNX.

To the Editors of THE LANCET.

SIRS,—In the very kind notice of my recently published work which appeared in your columns reference is made to two points of considerable practical importance. As those who read the review without perusal of the book may arrive at an erroneous idea concerning my views, you will, perhaps, kindly allow me to make an explanation. Your reviewer is perfectly accurate when he writes: "..... while he impresses upon the reader the theory that affections of the anterior nares and pharynx, when coexisting with middle ear disease, need only be treated in so far as they are producing direct symptoms." It has, however, appeared to me desirable to explain that the naso-pharynx is very specially excepted from this statement (p. 567). With regard to the connexion between atrophic nasal catarrh and laryngitis sicca, my own experience points to the existence of two varieties of the latter. One of them, the more common, occurs, so far as I have seen, independently of any nasal affection; while the other, less frequently met with, is practically identical with Baginsky's "ozæna laryngis," described on p. 119.—I am, Sirs, yours faithfully,

Edinburgh, May 14th, 1892. P. MCBRIDE.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Hospital Saturday in Liverpool.

SATURDAY, the 14th inst., was observed this year as Hospital Saturday. As might have been expected in so business-like a community as this is, the committee have profited by past experience, and have resolved to rely more upon the amounts raised by weekly or monthly contributions all the year round, in workshops and other large centres of working men, than in that raised by boxes deposited on a certain day, to be called for a few days later. The results of this latter mode of collection have been found insufficient to justify the expenditure. A concert is also to be given in St. George's Hall on the 23rd inst., under distinguished patronage, for the benefit of the medical charities, and there is every reason to expect a "bumping house" and a substantial addition to the Hospital Sunday Fund.

Crimes of Violence.

Lancashire has for years past had an unenviable reputation for crimes of violence. Some years ago it took the form of what was locally termed "purring"—i.e., kicking

the unhappy victim with heavily shod boots or clogs till insensibility or even death supervened. More recently the mode of attack has been by knives, in the hands of gangs of youths calling themselves the High Rip Gang, in this city, and "scuttlers" in Manchester. As the practice of "purring" became obsolete after some exemplary sentences involving a long term of penal servitude, it is hoped that similar drastic measures may end this reckless use of the knife.

The Liverpool Royal Infirmary and Elections to Honorary Medical Offices.

An election will shortly take place of one assistant physician and two assistant surgeons to the Royal Infirmary, under greatly improved conditions over those which governed former elections. The electorate in these latter having been the trustees, each candidate was put to considerable expense for advertising, printing, &c. Worse than the expense was the necessity of having to canvass a large number of persons of both sexes scattered over a very wide area, involving very considerable labour, in addition to the humiliation involved in such a mode of election. Now all is happily changed, the elections in future being in the hands of an election committee sufficiently comprehensive to be beyond the power of a clique, and yet not large enough to be unwieldy. Any canvassing or advertising on the part of any candidate will disqualify him for election; but candidates may send copies of their testimonials, not exceeding a specified number, to each member of the election committee. For the three vacancies there are already a number of eligible candidates, and the result of this first election carried out on the new mode will be watched with much interest.

Coffee Drinking.

Some years ago it was suggested that prizes should be given for the best-made cup of tea or coffee as much as for the best show of fruit or flowers. It is to be regretted that the suggestion was not more capable of being put in practice, since the tasting of many specimens and the awarding of the prize would involve insuperable difficulties. It is satisfactory, however, to notice both an increased demand for and an equally increased supply of *cafés* where excellently made coffee can be had at very moderate charges. To many of the daily increasing number of total abstainers a cup of really good coffee is perhaps more wholesome, as well as more palatable, than a too free use of aerated waters; while many who are moderate drinkers would prefer coffee in the middle of the day, or at other times when on duty.

May 17th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Growth of Newcastle-on-Tyne.

THE report of our city engineer is an instructive document as showing the rapid growth of the place, which, in 1882, contained 20,600 houses occupied by 147,000 persons, while in 1892 the number of houses had risen to 26,800, and the population to 192,000, an increase of just 30 per cent. The increase in houses and population has taken place chiefly in the east and west-ends of the city, resulting in the formation of practically two new towns. The question of the housing of the poor has been endeavoured to be met by a scheme for the erection of lodging-houses for single men and women, and the city engineer hopes that the well-meant but short-sighted opposition to this proposal may not be pushed too far, or, he says: "You may find too late that what you can do voluntarily for from £15,000 to £20,000 may cost you under pressure from £80,000 to £100,000." He is no advocate of the pail system, but opposes it on economical and sanitary grounds, and quotes the example set by Manchester, where it is being at some expense abolished.

Newcastle Eye Infirmary.

The annual meeting of the Newcastle Eye Infirmary has been held; the Mayor presided, and referred to the good work done by the institution, which had been a recognised charity for seventy years, and had done in its time a large amount of useful work. Dr. Jeaffreson in his report said that nearly 3000 new patients had been treated, of whom 307 were in-patients, and that about 20,000 consultations had been held. Complaint was made of the inadequate support the institution received, and the financial report showed that the ordinary expenditure had exceeded the ordinary income by over £300. An instance was given in which an important manufacturing firm had sent in thirty-six patients for treatment and had given no subscriptions; some of these cases were very serious. Some of the workmen's committees who distribute their own collections are more liberal, but still there was room for improvement in this, as for fifteen guineas subscribed they been called upon to treat 188 workmen.

Middlesbrough and District.

A curious case of milk adulteration came up before the Middlesborough magistrates lately, in which the defendant was charged with adulterating milk with water to the amount of 7 per cent. It was urged that a cow by poor feeding might have its milk reduced to this extent, and that some day the magistrates might have to decide how far a cowkeeper was justified in watering the milk by adulterating the cow! Ultimately the excuse did not avail, and the defendant was heavily fined, with costs.—The annual meeting of the North Ormesby Cottage Hospital has been held and the report presented, which shows that the total number of in-patients is 517. The financial state of the hospital was satisfactory. — The medical officer of the Normanby Local Board, in reference to the high death-rate prevalent in the previous month—viz., 35·6 per 1000—states that this is abnormally high, and is chiefly due to an epidemic of measles. Scarlet fever had been reported, but was not fatal.

Carlisle and District.

Sunday, the 8th inst., was Hospital Sunday in Cumberland and Westmoreland, and collections were made in the churches and chapels on behalf of the medical charities. The following will participate in the fund: The Cumberland Infirmary, Carlisle Dispensary, Carlisle Fever Hospital, Silloth Convalescent Institution, and Workington Infirmary. The weather was fine, and the congregations considered up to the average of previous years.—There has been rather an alarming outbreak of typhus fever in the Finkle-street district of Carlisle; in all about eleven cases have been reported and removed to the Fever Hospital. The inspector reported that from one of the fever dens were taken six cartloads of dirt, rags, and bedding, old cushions, baskets, and cow's horns. Typhus fever is also reported as having broken out at Workington and Whitehaven. At the former town there has been a serious outbreak of measles, and the infant schools have been closed in consequence.

Langholm and its proposed Hospital.

A meeting was lately held at Langholm in support of a hospital to be erected for the treatment of infectious diseases in the district. Nothing, however, was decided. It was pointed out that the late Mr. Hope of New York, who had left £80,000 for the erection of a hospital in Langholm for those above the pauper class, had wished the hospital to be made available for infectious diseases as well; but as the bequest was the subject of litigation in New York it was considered it would be well in the meantime to watch and wait.

Sunderland.

Mr. A. E. Harris, medical officer of health, reports as to the excessive number of deaths during the last fortnight, 134, or an annual mortality of 26·35 per 1000; of these deaths, 33 were from respiratory diseases. The excessive mortality was attributed to the severity of the weather on the east coast. The only other town, he said, similarly situated to Sunderland was South Shields, which had also a high death-rate—viz., 26 per 1000. Dr. Squance, in his report as medical officer for the Sunderland rural authority, in his reference to influenza, says that, so far as could be estimated, about 3000 persons were attacked, but only one case proved fatal. The annual report of the Sunderland Nursing Institute has been held, which shows that the district nurses attended, besides private cases, 120 patients, and that their earnings had amounted to nearly £500. The demand for their services had been well sustained, and, with subscriptions and earnings, the institute was able to pay its way. It is proposed, with the amount remaining in hand from that subscribed to the Victoria Hall disaster (over £4000), to purchase a house and grounds at Harrogate which is now available, and to furnish and equip it as a convalescent home for children in connexion with the Sunderland Infirmary; but the matter is to be arranged, it is hoped, at an early meeting of the disaster fund.

Charitable Bequests.

It is stated that the late Mayor, Mr. Joseph Barker, J.P., of Holmefield Thornes, near Wakefield, manufacturer, left personal estate valued at £308,000, of which £15,000 is bequeathed to charitable institutions.—The late Mr. Josiah Finney of Newcastle-on-Tyne left £300 to the Royal Infirmary and £100 each to the Eye Infirmary and to the Throat and Ear Hospital of this city.

Newcastle-on-Tyne, May 18th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Aberdeen Royal Infirmary: Professor Ogston's Resignation.

THE following paragraph appeared in the *Aberdeen Evening Express* of the 12th inst.:—"Dr. Ogston, it is said, has acknowledged receipt of Mr. Littlejohn's letter on behalf of the directors of the infirmary, but the professor, while thanking the Board for their kind offer of six months' holiday, points out, I believe, though not in so many words, that he happily does not feel the need of such rest. In effect, his reply is that he cannot withdraw his resignation until the management consent to give him such facilities for his work as, in his judgment, are absolutely requisite. The profession at large, and his friends among the general public, intend, if necessary, it is said, to bring further pressure to bear on the managers to accede to the professor's requests."

Aberdeen Hospital for Sick Children.

At the monthly meeting of directors, held on May 12th, Mr. John Marnoch, M.A., M.B., C.M., Royal Infirmary, was unanimously elected house surgeon and physician for six months ensuing. The monthly report showed that there were fifty-nine patients in the wards on May 12th, that ninety-five in-patients had been treated during the month, of whom thirty-five were dismissed cured or relieved, and one died.

Aberdeen University Extension and Rearrangement of Classes.

In a circular issued to the members of the University Court and Senatus, Dr. Stephenson recommends the following arrangements to suit the alterations rendered necessary by the extension scheme:—1. That full provision be made at Marischal College for all the departments included in the medical curriculum. 2. That during the winter session the arts classes at present instituted, with the exception of natural philosophy, be held at King's College in the morning; and that natural philosophy be transferred to Marischal College, where, together with those of chemistry and geology, the classes can be conducted in the afternoon. 3. That zoology and botany be taught in the summer session at Marischal College. 4. That extra lecture-rooms be provided at Marischal College; and that the space vacated by natural philosophy in King's College be utilised for a hall, a students' common room, or an examination room.

Health of Aberdeen.

The death-rate for April was 19·43 per 1000, as compared with 23·71 in March. Dr. Matthew Hay notes that the epidemic of whooping-cough is on the wane, 191 cases having been reported, as compared with 229 in March. The slight increase in the number of cases of scarlet fever he believes to be merely temporary, and that the epidemic is dying out. There are fewer cases of typhoid fever than in any month since June last—only six reported, with no deaths. Diphtheria cases are still more numerous than usual, ten, with three deaths, having been reported. Influenza has entirely disappeared, but typhus fever has not been thoroughly eradicated, despite the vigilant efforts of the sanitary staff.

May 18th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Royal College of Surgeons.

AN election for a member of Council took place yesterday, when, of five candidates, Mr. Arthur Benson was elected in the place of Mr. Colles, resigned. Mr. Benson is ophthalmic surgeon to St. Mark's Hospital, and was until recently an examiner in ophthalmology in the college.

Epidemic of Measles in Dublin.

Measles is still prevalent, and the deaths for the week ending May 7th were forty, the highest number recorded during the present epidemic. During the past seven weeks 176 deaths have been caused by the malady.

Child Insurance: a Bad Case.

At the City Quarter Sessions last week, Mary Delany was indicted for having ill-treated an infant aged three months. The infant was given by its mother to the prisoner to nurse, but had died, and the bill for manslaughter which the Crown had sent up was thrown out by the grand jury. The Recorder said it appeared to him that this was a case of murder, and was a terrible instance of the horrible system of insuring, not the lives of children, but insuring them for the purpose of death. It appeared from the depositions that when the prisoner was brought to the police station she stated she had the child insured for the previous three weeks, and if she was "in benefit" for six months she would get 30*s.*, and if the child died she would get £3 if she had twelve months' benefit. He was sure, if the grand jury had these facts before them, they would not have thrown out the bill for manslaughter. He considered it a public duty to let a bad case of this kind be known, and he felt that the indictment was not at all of as grave a character as it should be. The Recorder imposed the highest sentence he could inflict—viz, two years' imprisonment, with hard labour.

Health of Dublin for March Quarter.

The births in the Dublin Registration District for the quarter ending April 2nd numbered 2483, and the deaths 3347, or 38·3, being 5·7 above the average for the March quarter. Zymotic diseases caused 477, or 318 over that of the corresponding quarter of 1891. Influenza and its complications caused 186 deaths; measles, 85; whooping-cough, 73; and diarrhœa, 28. There were 30 deaths from typhoid fever, only 1 from typhus fever, and but 3 from ill-defined fever.

The Lord Chancellor has appointed John Eustace, M.D., of Elmhurst, Glasnevin, to the Commission of the Peace.

May 17th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Functions of the Supra-renal Capsules.

THE determination of the part played in the economy by the above mysterious organs is a matter of importance, especially in connexion with Addison's disease. MM. Abelous and Langlois have lately been studying the results of their partial and complete ablation in the guinea-pig. They report (Soc. de Biologie, May 7th) that the total destruction of one capsule by crushing, ligature, or cauterisation dose not bring about a fatal result. Most of the subjects maintain their normal weight, or, if they become emaciated during the few days following the operation, regain flesh quickly. In two animals out of a total of forty there was noted, however, rapid loss of flesh, followed by death. Total destruction of the two supra-renal bodies determines a fatal result after a short delay. That this effect is not caused by the mere shock of the operation is proved by the fact that the *dénouement* is the same when an interval of ten or fourteen days is allowed to elapse between the two operations. Partial destruction of the two organs, if it involve only a small portion of them, produces but an insignificant modification of nutrition. A more extensive ablation kills after a prolonged period of progressive emaciation. Mindful of the alleged virtues of the Brown-Séquard method, the experimenters essayed to replace the excised organs by the injection of their juice. The fatal result was thereby delayed to double the usual period of survival, and it was remarked that the convulsive twitchings observed in certain instances were conspicuous by their absence. The researches conducted quite recently by M. Albanese in Mosso's laboratory are confirmative of the above conclusions, which go to prove that, in some way as

yet undetermined, the supra-renal capsules are structures indispensable to the guinea-pig economy.

L'Hôpital où l'on Tue.

On the 7th inst. Paris was startled by the appearance of an article in *Le Jour* headed as above, and signed by a well-known municipal councillor. The establishment which, in the opinion of the literary ædile, merits this sinister appellation is St. Louis, and the writer proceeded to justify this contention by roundly accusing M. Péan and his *internes*, through gross neglect and non-observance of modern rules of antisepsis, of responsibility for the death of Hamonod, one of the victims of the Anarchist explosion in the Boulevard Magenta. He further formulated a grave charge against M. Camescasse, M. Péan's chief *interne*, of having unwarrantably usurped the functions of M. Ricard, the *Chirurgien de Garde*, who should have been summoned to amputate the leg of the other victim, Véry, one of whose eyes was, in addition, enucleated in the hospital. It is incontestable that, in performing a major operation, M. Camescasse exceeded the strict limits of his duties. But the *interne* has ample precedents to go upon, and urgent operations are performed daily by men who, although still *in statu pupillari*, are in most cases perfectly competent to cope with such emergencies. No objection has as yet been raised against the performance by an *interne* of such a difficult operation as tracheotomy. A graver charge is that of dirtiness in the dressings in M. Péan's wards. I think I am warranted in stating that this accusation is unfounded, and that the fatal issue in the case of the two men (Véry has since succumbed to his injuries) was certainly not due to neglect. It can hardly be expected that such an acrimonious controversy as this should occur without at least one duel being fought over it. M. Camescasse, in effect, has exchanged the scalpel—a weapon which there is every reason to believe he wields very capably—for the sword, and has by this means endeavoured to convince one of his accusers—himself a medical man—of the error of his ways. The valiant *interne* succeeded in "pinking" his adversary, but it is doubtful if any other result will be forthcoming from this observance of a custom which has happily disappeared from *la vie Britannique*.

A New Academician.

At their last meeting the members of the Académie des Sciences proceeded to fill up the vacancy in the section of medicine and surgery caused by the demise of Professor Richet. There were three candidates—all surgeons—viz., Professor Guyon; Professor Lannelongue, well known as the inventor of the new sclerogenic treatment of tubercular and other affections; and Professor Duplay. Professor Guyon was elected by a small majority over M. Lannelongue.

Paris, May 18th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Ernst Brücke's Last Works.

THE celebrated physiologist, Ernst Brücke, who died not long ago, had to resign his professorship in Vienna in 1890, in accordance with the statutes of Austrian universities, which require the retirement of professors who have completed their seventy-first year. The time thus placed at his disposal was spent by him in writing two books, one entitled "Schönheit und Fehler der Menschlichen Gestalt" ("Beauty and Defects of the Human Form"), which appeared in 1891; the other, "Wie Behütet man Leben und Gesundheit seiner Kinder?" ("How can one Guard the Lives and Health of one's Children?"), which appeared after his death.

The Alvarenza Prize.

The Berlin Society of Medical Men, which bears the name of the famous physician in ordinary of Frederick William III. of Prussia, Christoph Wilhelm von Hufeland, received a large and unexpected bequest not many years ago. The Portuguese physician, Da Costa d'Alvarenza, who had enjoyed its hospitality in his youth, bequeathed it a part of his fortune, with instructions that the interest should be spent in prizes for medical work. The Alvarenza prize was offered for the first time in 1891, and the theme proposed was Influenza. The successful candidate is Dr. Ruhemann of Berlin, and his treatise has been published by Thieme of Leipsic. In obedience to the wish expressed by the Hufeland Society, he restricted himself in the main to the collecting, sifting, and arranging of the literature of the subject, treating the epidemic of 1890–91 in special detail. He refers to all the chief writings on influenza since the fourteenth century.

The Eclampsia Bacillus.

An alleged important bacteriological discovery is reported from the Pathological Institute of the University of Halle. Professor Ackermann's first assistant, Dr. Gerdes, is said to have demonstrated the presence of a bacillus in the liver, lungs, and kidneys in a severe case of eclampsia. The bacillus acts as a poison on mice and rats. It was stated to have been found in very large numbers in the above-mentioned organs.

Flagellation in Hysteria: a Judicial Inquiry.

A sensational trial took place last Monday at Kassel. The accused was Dr. Georg Moritz Wiederhold, the owner and head of the well-known establishment for the treatment of nervous diseases at Wilhelmshöhe, near that city. One of his patients was a lady of fifty-one, the wife of a retired Consul-General. In consequence of an operation she had undergone she suffered from weakness of the nerves, which had degenerated into acute hysteria. Dr. Wiederhold admitted that he had chastised her because she had become more and more uncontrollable, had acted like an obstinate child, and had indulged in crying and screaming without cause to such an extent that the other patients in the house had been excited thereby. All attempts to silence her by kindness had proved vain, and he had resorted at last to corporal chastisement. The woman had been entrusted to him as suffering from a nervous disorder, but was otherwise healthy, and her doctor had told him to treat her with rigour. When her husband visited her once he had heard him (Dr. Wiederhold) threaten her with blows. The husband had expressed his regret at that, but he (the doctor) had assumed that he approved of the treatment, if only his wife got well. He had chastised the lady three times. The first time he had given her two boxes on the ear, which she had parried. The second time, that she gave way to screaming he had gone into her room with a thin little stick, and had given her, as she lay in bed, several blows with it on the nates, which were covered by her robe. On being told that traces of the blows had been visible two months after their infliction, he said that must have been due to defective assimilation. The third time, when he chastised her in the same manner, he had used a horsewhip. He declared that he had not acted so from brutality, but only to cure the lady by physical excitation of her morbid desire to attract attention. He emphatically denied having called her "nichtswürdiges Luder" (vile bitch) and "alte Vettel" (old slut), of which he was accused. The expression "Vettel" he had indeed used, but only in admonishing her as an educated lady to give up screaming, which was not worthy of her, and the like. The examination of the husband of the ill-treated lady caused a deep sensation among the numerous audience. He was in a state of extreme excitement. He declared that he had brought the action against Dr. Wiederhold not in thirst for revenge, but in order to protect suffering mankind from the further cruelties of such a man. His wife had been so intimidated that, when he arrived to take her away, she had told him for God's sake not to speak loud, else the doctor would come and beat her. He had found her in a frightful condition; she would not be able to give evidence for a long time to come. The old servant of the family had been present only on the occasion of the boxes on the ear; on the other occasions she had been sent out by Dr. Wiederhold. The traces the blows had left were broad red desquamating stripes. He would never have consented to such treatment; on the contrary, when he had shown excitement on hearing the threat of blows, Dr. Wiederhold had said, "Do you believe I would do that? It is only a threat." His wife had told him that Dr. Wiederhold had pulled her out of bed by the hair. Dr. Wiederhold received 115 marks (shillings) a week for the patient's board and lodging, and 300 more for medical treatment (for what term is not stated). The lady's attendant gave evidence that the boxes on the ear were so administered that the lady's cheeks be-

came extremely red, and also somewhat swollen. On the other occasions she had always been sent out, but the lady had always told her afterwards. In being thrown into bed her mistress had also had her knee hurt. The doctor's general manner of treatment had been harsh. Dr. Wiederhold is a man of forty-two and of uncommon strength. Three Dresden doctors stated that they had seen the traces of considerable chastisements. Professor Tuszeck of Marburg, who gave evidence as an expert, declared that it is scientifically inadmissible to use corporal chastisement in the medical treatment of nervous patients. Of Dr. Wiederhold's establishment he had heard nothing but good. People always said: "Dr. Wiederhold is rough, but his establishment is good." The other expert, Professor Pellmann, head of the lunatic asylum at Bonn, stated that he was personally against the therapeutic application of corporal chastisement; in State establishments it was absolutely excluded. There were, however, some adherents of that method. The Public Prosecutor maintained that Dr. Wiederhold's conduct was due not to medical considerations, but to sudden anger, and denied the existence of extenuating circumstances. The counsel for the accused pleaded for acquittal, or at least extenuating circumstances, but Dr. Wiederhold was sentenced on Friday to three months' imprisonment. Extenuating circumstances were not admitted.

Miscellaneous News.

The last of Professor von Hofmann's writings—a short memoir of Peter Griess—appeared just a few days before his death. He had also finished an investigation of polymeric oils of mustard, and intended to report on it at one of the next sittings of the German Chemical Society. The place left vacant by him in the University and in the Chemical Institute will be filled during the present half by Professor Ferdinand Tiemann, who has assisted him in the Institute for years past.—Professor Krause of Halle has been appointed Head Surgeon in the City Hospital in Altona.

Berlin, May 17th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

The Climate of Canada.

TO many of the readers of THE LANCET whose ideas of the climate of Canada are obtained from illustrations of our winter sports and pastimes a few items from the report of the Superintendent of Toronto Observatory may be of use as well as interest. The mean temperature during 1891 was 45·87° F., being lowest in January, 24·15°, and highest in August, 65·56°. Dividing the year into seasons, we find the mean temperature in winter 26·99, spring 53·03°, summer 63·91°, autumn 39·53°. The extremes of heat and cold were June 16th, mean temperature 77·62°, and Jan. 16th, 5·13°. Barometric pressure showed a mean height of 29·6385 inches. Of rain there fell 26·735 inches and of snow 47·8 inches, the former falling on 125 days and the latter on seventy days. Of the 4463·3 hours that the sun was above the horizon there was bright sunshine for 2065·4 hours.

Hospitals in Ontario.

From the report recently brought down to the Provincial House it appears that twenty-seven hospitals throughout Ontario received aid during 1891, being an increase of six over the previous year. The number of patients has increased from 6032 ten years ago to 10,523, the daily cost per patient during 1891 was 75·14 cents, and the proportion of State grant to the total maintenance expenditure was 32 per cent. A gratifying feature of the report is the increase in subscriptions and donations from private sources, the amount being about double that of 1890. The amount of aid to hospitals and charities was 134,992 dollars.

Registrar-General's Report for Ontario, 1890.

The report of the Registrar-General for Ontario for 1890 has just been issued. The returns show of births 47,773, a ratio of 22 per 1000 of population; the male births were 24,538, and the females 23,235, a proportion of 105·6 males to 100 females. March, January, August, and April returned the highest number; while November and February returned the lowest. In 284 cases twins were reported, and 4 of triplets. Of the total number of births, 626 were illegitimate, as against 958 in the previous year. The number of marriages registered was 14,463, being a ratio of 6·9 per 1000 of population. The death-rate was at the ratio of 11·1 per 1000, the total number being 24,013; the ratio in the eleven cities was 18; 110·6 males died to every 100 females. January, August, February, and March were the most fatal months; June and November apparently the most healthy. Of infants under five years of age 69·7 deaths were returned, being 33·2 per cent. of the whole. Twenty-three deaths were returned of persons supposed to have reached 100 years and over, but the report adds that in every case satisfactory proofs were wanting as to their correctness. Phthisis, usually the principal cause of death in Ontario, gave place to pneumonia—accounted for, no doubt, by the epidemic of influenza that year—the percentage being 14·7 of the whole. Phthisis is classed second with 10·5 per cent. From the same table it appears that deaths from contagious diseases have been gradually decreasing. The last table of the report gives death by occupations, given in six classes. The average age of cultivators of the soil was 60·5 years; of mechanics, 52·1; of business men, 48·83; of professional men, 51·1; of miscellaneous occupations, 60·3; of females at work, 37·3. With a view to prevent the use of tobacco by minors a Bill was passed at the recent session of the Local House prohibiting the sale of "the weed" in any form to persons actually or apparently less than eighteen years of age. Penalties are attached for the better enforcing of the Act.

During the latter part of this month a post-graduate course of two weeks' duration will be given by the Faculty of the University of Toronto. The course will be both didactic and clinical on subjects of general interest.

Toronto, May 10th.

Obituary.

PHILIP VANDERBYL, M.D.ED., M.R.C.P.L., M.R.C.S.

WE regret to have to record the death of Mr. Vanderbyl, which occurred suddenly at his London residence, 51, Porchester-terrace, Hyde Park, on the morning of Saturday, the 14th inst. Mr. Vanderbyl was fourth son of the late Hon. P. V. Vanderbyl of the Cape of Good Hope, and was born at the Cape on April 28th, 1827. He came to England in 1845, and shortly after his arrival he entered the Edinburgh University, where he secured a prize in Natural Philosophy in his first year. On taking his degree of M.D. in 1849 he obtained the highest honours and received a gold medal. Mr. Vanderbyl then visited the continental schools of medicine, and studied for two years in Paris, Vienna, and Utrecht with a view of becoming a professor in one of the medical colleges. He became President of the Royal Medical Society of Edinburgh, and within three months after his arrival in London he was appointed lecturer on anatomy and histology at the Middlesex Hospital. Becoming a Member of the Royal College of Physicians in 1855, he contributed many articles to the Transactions of the Pathological Society and to the *British and Foreign Medico-Chirurgical Review*. Mr. Vanderbyl was not, however, destined to follow out a medical career, for in 1853 he married the only child and heiress of the late Mr. James Alexander, at that time and for many years subsequently the senior partner in the well-known house of Redfern, Alexander, and Co. In the year 1885 he entered Parliament as the member for Portsmouth, but was defeated by Sir Samuel Wilson in the following year. He unsuccessfully contested Great Yarmouth in 1865, and in 1868 he was returned for Bridgewater, but was unseated on petition. He also unsuccessfully contested Winchester in 1888. By his marriage there is issue three sons and two daughters. Of the latter, the elder married Captain Clowes of the 60th Rifles, and the younger married Mr. Montrose Cloche, of 11, Queen's-gardens, Hyde Park.

JOSEPH SCHOFIELD, M.R.C.S., L.S.A.

MR. SCHOFIELD passed away at his residence, Church-street, Dunkinfield, on the 29th ult., at the age of eighty-one. After his preliminary education he selected the medical pro-

fession for his future career, and was apprenticed to the late Dr. Kay, who had a large practice at Ashton. Subsequently Mr. Schofield pursued his medical studies at Guy's and St. Thomas's Hospitals. He took the M.R.C.S. and L.S.A. qualifications, and commenced private practice in Dunkinfield, soon becoming known as a skilful accoucheur. He was a strong believer in vaccination both in theory and practice, and had, it is stated, received several Government grants for successful vaccination. About fourteen years ago he was appointed medical officer of health for Dunkinfield. As surgeon to the Ashton-under-Lyne and District Union he rendered many valuable services. The deceased leaves a widow and four children.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen have passed the First Professional Examination in Anatomy and Physiology for the diploma of Fellow:—

Cornelius A. Griffiths, M.R.C.S., of Bristol Medical School; John M. Hall, M.R.C.S., of Belfast and London Hospital; Thomas W. F. Gann, M.R.C.S., of Middlesex Hospital; Hugh Ainsworth, of Owens College; Charles M. Bryant, of Durham University; Joseph S. K. Smith, M.R.C.S., of University College, Liverpool; Edward L'Estrange Ledwich, of Peter-street Medical School, Dublin; Courtenay H. Drake, of St. Bartholomew's Hospital; George H. Hopkins, M.R.C.S., of University Colleges, London and Liverpool; Cyril H. Walker, M.R.C.S., of Cambridge University and London Hospital; Cecil M. Hewer, of St. Bartholomew's Hospital; Alan McDougall, of Owens College; St. John Stanwell, Extra-Mural School and Edinburgh University; Ernest Knight, of Owens College; Archibald W. Cuff, of St. Thomas's Hospital; Walter Roughton, M.R.C.S., of St. Bartholomew's Hospital; William S. Melsome and William S. Griffith, M.R.C.S., of Cambridge University and St. Thomas's Hospital; Frederick N. Cookson, of Middlesex Hospital; Joseph Griffiths, M.R.C.S., of Edinburgh and Cambridge Universities; Andrew H. Smith Hallidie, M.R.C.S., of London Hospital; William G. Stone, of St. Thomas's Hospital; Leonard A. Parry, of Guy's Hospital; Leonard J. Miskin and Sidney W. F. Richardson, of St. Thomas's Hospital; George H. Cowen, of London Hospital; Charles P. White, of Cambridge University and St. Bartholomew's Hospital; Francis E. Greenwood and William E. Lee, of St. Bartholomew's Hospital; Joseph H. Wilkes, M.R.C.S., of St. Bartholomew's Hospital and Cambridge University; Ernst Michels, M.R.C.S., of Würzburg, Berlin, and Kiel Universities; Robert Corfe, of St. Mary's Hospital; Frederick C. Sprawson, John S. Boden, and Arthur Bousfield, of King's College; Reginald J. Gladstone, of Aberdeen University and Middlesex Hospital; Wilfred G. Mumford, Leopold E. V. Every-Clayton, and Guy E. Manning, of Guy's Hospital; Gerald R. Baldwin, of St. George's Hospital; Alfred Banks, M.R.C.S., of St. Thomas's Hospital; Geo. L. Eastes, of Guy's Hospital; John H. Fisher, M.R.C.S., and Cuthbert S. Wallace, M.R.C.S., of St. Thomas's Hospital; Edmund B. Jones, of Charing-cross Hospital; Wilfred J. Harris, of Cambridge University and St. Mary's Hospital; Forbes Fraser, of St. Bartholomew's Hospital.

Sixty candidates were referred back to their professional studies for six months.

ROYAL UNIVERSITY OF IRELAND.—The following degrees were conferred by the Vice-Chancellor last week:—

Doctor of Medicine.—Ambrose Birmingham.

Bachelor of Medicine, Surgery, and Obstetrics.—Robert Campbell, Michael Boyle, Herbert W. Cunningham, Richard Heard, Patrick L. Aherne, Kennet B. Barnett, D. Bennett, J. F. Bennett, Henry R. Corbett, Michael Coughlan, Isaac A. Davidson, John Dodd, Wm. J. Molloy, Michael D. Sullivan, James R. Thomson.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following have obtained the Licence in Dental Surgery:—

John H. Edward. | James Wm. Smith.

NAVAL MEDICAL SERVICE.—The undermentioned gentlemen who competed at the examination held on May 2nd and following days at the Examination Hall, Victoria Embankment, for appointment as Surgeons in the Royal Navy, have been successful:—

	Marks.		Marks.
S. J. Oddie, M.B. ..	2701	G. T. Bishop	2333
H. B. Hall, M.B. ..	2668	E. F. Mortimer ..	2165
H. W. G. Green ..	2489	B. F. Parish	2161
T. E. Honey, M.D. ..	2487	F. A. Capps	2160
E. B. Pickthorn ..	2338	C. F. Warren	2157

ST. JOHN AMBULANCE ASSOCIATION.—A course of six lectures to men, on "First Aid," under the auspices of the above Association, has been given by Mr. N. Hay Forbes, L.R.C.P., M.R.C.S., of Tunbridge Wells, the average attendance being forty. At the examination forty-two candidates presented themselves, thirty-seven of whom passed.

A CENTENARIAN.—Mrs. Blanche Turner of Fornham St Martin, near Bury St. Edmunds, has just attained her hundred and third birthday.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.—The President, the Duke of Westminster, K.G., will take the chair at the annual meeting of this institution (Albany Memorial), Queen-square, Bloomsbury, at 4 o'clock on Thursday, the 26th inst., supported by Dr. J. Russell Reynolds, Sir J. Crichton Browne, Vice-presidents, and others.

KASHMIR MISSION HOSPITAL.—The report of the Kashmir Mission Hospital for 1891, by Mr. A. and Dr. E. Neve of the Church Missionary Society, shows that the work which has been carried on for many years has been vigorously prosecuted and even extended of late, the hospital, which was opened in 1875, having been almost entirely rebuilt, with considerable additions. A new feature of the work is the charge of the Maharajah's Leper Asylum, which has been entrusted to the medical missionaries by his Highness. The surgical work in the hospital continues to show most satisfactory results, for out of about 2000 major and minor operations there were only four deaths; two of these were cases of vesical calculus—a comparatively rare affection in Kashmir.

KING'S COLLEGE HOSPITAL.—The annual festival dinner was held on Saturday at the Freemasons Tavern, Great Queen street. The Duke of Fife presided. There was a large and distinguished assembly. The chairman, in proposing the toast "Success to King's College Hospital," remarked that in such a civilisation as ours, with its great industrial populations and its more and more complex life, the hospital was an absolute necessity. In addition to their great work of relieving human suffering, they were indispensable to medical education. This institution stood in need of financial support. Its assured income was not £1000 a year. From £17,000 to £18,000 had to be raised annually, and he made an earnest appeal for liberal aid. Contributions were announced to the amount of nearly £3200.

METROPOLITAN ASYLUMS BOARD.—Sir E. S. Galsworthy presided at the usual fortnightly meeting of this board last week. He pointed out that in view of the returns showing a rapid increase of fever and also an augmentation of small-pox cases (in one day alone last week fifteen cases were admitted), it was quite clear that efforts would have to be made for the future accommodation of small-pox, and also for extra provision for fever cases. Under these circumstances a resolution was adopted that, having regard to the difficulty heretofore experienced in obtaining a site for a fever hospital, it be referred to the General Purposes Committee to consider, and, if deemed advisable, to take steps to procure the power to acquire land compulsorily, similar to the power vested in County Councils and other public bodies.

BEQUESTS AND DONATIONS TO HOSPITALS.—The Court of Common Council of London has granted 200 guineas to the Metropolitan Convalescent Institution, and 50 guineas to the "Morley House" Seaside Convalescent Home for Working Men, St. Margaret's Bay, near Dover.—The Clothworkers' Livery Company has voted £100 to the University College Hospital, London.—The Duke of Westminster has forwarded £400 to the treasurer of the London Temperance Hospital, for the benefit of the recently opened "Grosvenor Children's Ward."—The late Mrs. Oliver Haywood of Claremont, Pendleton, Manchester, bequeathed £1000 each to the Ardwick and Ancoats Hospital and St. Mary's Hospital, and £500 to the Northern Counties Hospital for Incurables.—The following legacies to the Infirmary, Worcester, were announced at the last meeting of the committee: the late Mr. Allies bequeathed £450, the late Rev. T. L. Wheeler £300, and the late Mrs. M. Wood £50.—In remembrance of the kind treatment and benefit the late Mr. Charles H. Welling received while a patient in the Bootle Hospital, and to carry out an intention which he did not live to gratify, his widow, Mrs. Welling, has announced to the secretary of the hospital that she desires to contribute £200 to the funds of the institution as a token of gratitude.

FOOTBALL CASUALTIES.—In a match played on Monday at Cochrane Park, Irvine, between the Kilwinning Engineers and the Irvine Bakers, a young man fractured his left leg. Two members of the Irish Gaelic Athletic Association, Dublin, during a game on the 8th inst., violently collided, both players sustaining injuries to their heads.

SEWERAGE WORKS, HORNSEY.—An inspector of the Local Government Board has held an inquiry into the application of the Hornsey Local Board for sanction to borrow upwards of £9000 for sewerage works, and has expressed his approval of the proposed scheme, and will report to the central authority accordingly.

THE TEACHING UNIVERSITY. — The preliminary meeting of the Royal Commission recently appointed to consider the question of a Teaching University for London will take place to-day (Saturday) Earl Cowper has returned to town, and Mr. Leybourne, who held similar office under the previous Royal Commission, has been appointed Secretary.

PROPOSED CONVALESCENT HOME, HARROGATE.—The Sunderland Calamity Fund, subscribed to nine years ago on the occasion of the Victoria Hall disaster, when 183 children lost their lives, has not hitherto been utilised for any particular purpose. A proposal at the time to erect a convalescent home for children was not carried into effect. But now the committee of the Sunderland Infirmary have taken steps by which the fund will probably be handed over to the committee, for acquiring an eligible locality for a suitable home, and Heatherdene House, Lancaster Park, has been fixed upon. The fund amounts to upwards of £4000. The amount required for the purchase money and the necessary alterations and furnishing is estimated at £3700.

THE MISSION TO DEEP-SEA FISHERMEN.—The Princess Louise, accompanied by the Marquis of Lorne, attended the annual meeting of this mission, held on Monday, at Exeter Hall. During the meeting a telegram was received from the Queen, expressing her gratification that the mission was prospering. The Princess delivered to the skippers and mates of the medical mission smacks certificates of the St. John Ambulance Association for first aid. The report (which was read) stated that the patients numbered 8130, and the missionary visits 14,278. The financial statement showed a deficit of £167. Ten mission vessels are engaged in work the maintenance of which involved an outlay of £11,000, and other items had brought up the expenditure during the year to £21,845 The chairman spoke in eulogistic terms of the efficiency and utility of the institution, and appealed to the seamen at home for more liberal support of the special hospitals the mission had established for the sick and wounded.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.—The annual dinner of the members of the Pharmaceutical Society of Great Britain and their friends was held on Tuesday last at the Freemasons' Tavern. Mr. Michael Carteighe (president) was in the chair, and he was supported by Professor Armstrong, Professor Attfield, Sir G. Buchanan, Dr. J. Watt Black, Dr. J. Bell, Mr. H. J. Chaney, Dr. Cottle, Dr. Down, Professor W. D. Dunstan, Professor M. Foster, Professor Green, Dr. Farquharson, Professor Stewart, Professor Thorpe, and Sir H. Truman Wood. Dr. Farquharson replied to the toast of the Houses of Parliament, and he expressed the hope that the chairman, putting his pharmaceutical knowledge to practical advantage, might be able to tell them when a dissolution would take place. The House of Lords was so far crystallised, he thought, as to be beyond the influence of a solvent. Dr. Black replied for the medical profession, and Professor Michael Foster for the learned societies. After a few remarks from the chairman, suitably acknowledging the toast of the evening, that of the Society, the health of "Our guests" was given. About 200 members and friends sat down to dinner.

MEDICAL NOTES IN PARLIAMENT.

Galway Infirmary.

A BILL has been prepared by the Chief Secretary and the Attorney-General for Ireland for the reconstitution of the Galway Infirmary. It provides that, in lieu of the present infirmary, there shall be established a public general hospital, to be called the Galway Hospital, available for the reception of patients residing in the town and county of Galway, and managed by a board representative of the local boards of guardians. The Bill further provides that the medical staff shall consist of such surgeons and physicians of the Queen's College, Galway, or other duly qualified surgeons and physicians as may be appointed by the local Government Board, and that the hospital shall be available as a clinical school for medical students attending the Queen's College. It is specifically laid down that the hospital shall be available for any persons residing in the town or county who shall, so long as they remain in the hospital, defray the expenses of their maintenance and clothing; and for poor persons residing in the town or county who require special or surgical treatment, and the cost of whose treatment, maintenance, and clothing in the hospital is borne by the electoral divisions respectively liable.

Coroners in Boroughs Bill.

In the House of Commons, on Tuesday, the 17th inst., on the motion to go into committee on this Bill, Sir A. Rollit moved that it be an instruction to the committee that they have power to extend the provisions of the Bill to the appointment of deputies of coroners in counties, and as to the time of election. The motion was agreed to. The House then went into committee on the Bill. Sir A. Rollit moved the insertion of new clauses dealing with the appointment and powers of a deputy coroner of both a county and a borough. The clauses were agreed to, and the Bill passed through committee as amended.

Petroleum in the Suez Canal.

In reply to Mr. Aird, Mr. J. W. Lowther said the original concessions for the formation of the company and for the construction of the Suez Canal were granted to M. de Lesseps by the Viceroy of Egypt, and confirmed by the Sultan's firman. So long as the company complied with the stipulation in the concession of Jan. 5th, 1856, to treat the flags of all nations equally, Her Majesty's Government have no *locus standi* to interfere with the decisions of the company.

The Vaccination Commission.

Several questions with regard to the report of this Commission were placed on the notice paper of the House of Commons for Thursday, but owing to the absence, through illness, of Mr. Ritchie they were postponed.

The Colour Vision Committee.

In the House of Commons, on Thursday, Sir Michael Hicks-Beach, in reply to Sir Henry Roscoe, said he had received the report of the Colour Vision Committee of the Royal Society, and hoped to be able to lay it on the table in the course of a few days.

The Indian Medical Service.

Sir Guyer Hunter asked the Under-Secretary of State for India whether the advantages conferred on the Medical Staff by Royal Warrant, dated Aug. 7th, 1891, as regards rank and title, pay and allowances, had been extended to India. Would he explain why, in that country, the pay and allowances of Surgeon-Captains for the first five or six years of their service were only those of subalterns, and why the rank of Brigade-Surgeon, created in 1879, had hitherto been financially ignored so far as India was concerned; and what principle had been adopted in fixing the rate of pay of medical officers in India with reference to the rates adopted at home.—Mr. Curzon replied that the advantages of the Royal Warrant had been extended to India; it made no change in the pay and allowances of the Medical Staff. When the relative rank of the medical services was altered, and the grade of Brigade-Surgeon introduced by the Royal Warrants of 1879-80, the Secretary of State for India explicitly declined to sanction any increased charge on the revenues of India by reason of those warrants, and the present Secretary of State had no intention of departing from that decision. The rates of pay were based partly on rank and partly on length of service, but had no direct relation to the rates in force at home, nor did they vary with any variations of those rates.

THE METROPOLITAN HOSPITALS INQUIRY.

THE Select Committee of the House of Lords on the Metropolitan Hospitals met again on Monday at Westminster. Lord Sandhurst presided, and the other members present were the Earl of Kimberley, Earl Spencer, Earl Cadogan, Earl Cathcart, Lord Clifford of Chudleigh, Lord Monkswell, and Lord Zouche of Haryngworth.

Mr. Thomas Ryan, examined by the chairman, said he was chairman of a committee of secretaries of the principal hospitals appointed with a view to devising some uniform system of hospital accounts. The secretaries met and agreed to appoint a small committee of their number to determine the precise form of the accounts. This committee sat during some eight or nine months, and sent to the Hospital Sunday Fund authorities the scheme they had devised. The Hospital Sunday Fund authorities approved the scheme. A large general meeting was then held, and it too approved of what the committee had done. As a result, their system of accounts had been adopted by a considerable number of the hospitals. He should say that the principal ones had adopted it. Witness handed to their lordships three documents explaining the new system, one displaying a statement of income and expenditure, another an index of classification to guide people using the new form, and the third a synopsis of the index of classification. Witness admitted that the form was not quite that used in his own hospital—namely, St. Mary's. He imagined there were at present no accounts of London hospitals which were precisely similar. In the old form they had a heading called "Incidental expenses." This had been done away with as being a senseless sort of heading, which conveyed no meaning. Repairs had been thrown in as a subheading under "Establishment charges." They had put legacies aside and called them extraordinary income. They were included in the income and expenditure account, and in this respect the new form differed from that used in many hospitals. With the new form of accounts it would not be possible for a hospital which had received, say, £100,000 in legacies to show to the public a deficit at the end of the year. At present it was possible to have this sort of thing in some hospitals. Legacies must, under the new form, be shown as income. As a matter of fact, they would simply conform to the rule as regards any other income.

By the Chairman: Do you think this would be a more accurate guide to the public than the old form?—Witness: Speaking for the best of the hospitals, who adopted a very good form before, I do not think so, but I do think that the general public seem to want a uniform

system of accounts, which hospital experts can also see advantage in. I think it would have been a great mistake on the part of the hospitals not to regard this want of the public. But of course, if the general public expect to bring about a general likeness between unlike things, they will soon find out their mistake.

In reply to Earl Cathcart, witness said that the essential difference between the new system and the old was the introduction of this index of classification. The committee had not dealt with the out-patient departments. As a matter of fact, they had not cleared up the whole question of the accounts, because it was much more difficult to get some hospitals to join a movement of this kind than others. The Committee had only dealt with the statement of income and expenditure. They had not insisted on what the accounts should be. The question of the out-patient departments must be gone into afterwards, for it was very important.—Earl Cathcart: I wish to compliment you very much upon what you have done, because I think the form you have prepared is a very good one.

Questioned by the Chairman, witness stated that he had no knowledge of a sheet showing the daily record of meat, fish, butter, eggs, &c., consumed having been issued by the committee.

Replying to Earl Spencer, witness said they distinguished between ordinary and extraordinary repairs. A hospital might in one year have to take up the whole of the drainage system at a cost of several thousand pounds. This expenditure the committee thought should be considered as extraordinary repairs. It would not be fair to divide this expenditure into the cost per bed for the year, and therefore the committee had thrown it out in this way. He admitted that it might be more an improvement than a repair. Still the committee had to find a general title, and none better had occurred to them than what they had used.

By the Earl of Kimberley: Are repairs of a roof, for instance, ordinary repairs?—Witness: They may be so, but they cannot fairly be charged to the average per bed.—The Earl of Kimberley: Is not that in the nature of manipulating an account?—Witness: It may be so, but the manipulation is quite justifiable.—The Earl of Kimberley: It may be misleading to the public?—Witness: I do not think so. If you wish to get an accurate notion of the annual expenditure, you must do it or divide the amount over a certain number of years.—The Earl of Kimberley: I admit the difficulty is to get the average, but is it worth while arbitrarily to make this division?—Witness: I think it really has a good effect in the end.—In further examination by Lord Kimberley, witness said that the rule the committee had recommended with regard to estates was that a separate account should be kept, and the profit only brought into the hospital accounts.

In reply to the Chairman, witness said that with this system of accounts comparisons would be clear and obvious. Differences would not necessarily mean extravagance, for hospitals were differently managed. For instance, some hospitals did not supply tea and sugar.

In answer to Lord Clifford of Chudleigh, witness said that the Committee had not recommended, in the matter of repairs, that so much should be paid out of the year's income. They were anxious not to strain themselves into the position of mentors of the hospitals in other questions than accounts.

Questioned by Lord Monkswell, witness stated that it was conceivable, but not probable, that this system might lead to the stopping of repairs. At present he found hospital repairs were done in a very erratic sort of way. Everything depended on the condition of the funds.

Interrogated by the Chairman, witness said that the pay of the house carpenter, who did repairs, would appear under "Salaries and wages." Something might be said for putting it under "Repairs," but if their lordships were to go into the matter he thought they would come to the same conclusion as the committee.

The Earl of Kimberley expressed the view that the pay should be distributed so as to disclose the actual work done. It seemed to him that an account to be accurate must be accurate.—Witness: But you may carry accuracy into too great detail and become a little ridiculous.—The Earl of Kimberley: Not the least in the world. What is ridiculous is the way in which many of these accounts are kept. They are kept so loosely that nobody knows what is going on, and the looseness of the accounts is the bane of all these things.

After one or two more questions had been put and answered, Mr. Ryan was thanked for his attendance, and the Committee proceeded with the consideration of their report.

MIDWIVES' REGISTRATION COMMITTEE.

Dr. Rentoul of Liverpool was examined on Thursday before Mr. Fell Pease's Committee on Midwives' Registration. He said that by registering midwives they would practically repeal the Medical Act of 1886. By the Act of 1858 any person who was registered as a physician, surgeon, or apothecary could be placed upon a medical register. This was recognised to be an evil, because it supplied the country with partially educated practitioners. The Royal Commissioners appointed in 1882 to report upon the Medical Acts said it was a bad system, and recommended the triple qualification of medicine, surgery, and midwifery. The Medical Act of 1886 brought that into force. The Midwives Bill proposed to place the midwives upon a register giving them power to practise midwifery, and therefore it did away with the good effect of the Act of 1886 by reintroducing a partially qualified practitioner. The Bill provided only for attendance at natural labours. It did not define what a natural labour was, nor did it appoint any penalties for cases where midwives might overstep their duties. The Bill qualified the midwives to attend all cases of labour. In his opinion there ought to be training in the practice of medicine. In the Registrar-General's return for 1890 he found that 4255 women died during the year from the accidents of childbed. Of this number, 1056 died from puerperal fever. The remainder did not die from the confinement per se, but very likely from some accompanying disease, say, of the heart, lungs, or kidneys. If, therefore, the midwife was not educated to recognise these diseased conditions, it would be so much the worse for the lying-in woman. During 1890 he found that 15,208 infants died because they were prematurely born. The causes at work in producing premature labour in the mother were difficult to diagnose, and if the midwife had not received a medical training she could not diagnose them, far less treat the cases. The Bill also gave midwives power to treat infants during the puerperal state. Not only, therefore, must they have an education in medicine, but also in the diseases of children. It had been stated before a Select Committee that 30 per cent. of the total blindness of the country was due to infantile ophthalmia. This disease itself was frequently due to maternal gonorrhœa. Abroad the duties of the midwife were not tied down to cases of natural labour. For instance, in Belgium she was allowed to vaccinate, in Austria she was allowed to perform manual operations, in Norway and Sweden to apply forceps, and in Russia to treat diseases of infants and children. Witness called the attention of the Committee to the Medical Act lately passed in the Cape of Good Hope, where the duties of the midwives were not defined. For a considerable number of years there had been a tendency in the medical profession to dissociate the practice of midwifery from that of medicine. The nickname of "man-midwife" was applied to those who had the courage at one time to conduct confinements, and thereby raise midwifery to the level of medicine and surgery. At present even the Royal College of Surgeons refused to admit any practitioner to their Council who practised midwifery, and some years ago the Fellowship of the College of Physicians of London was refused to those men who practised midwifery. The next point Dr. Rentoul laid down was that there was not a sufficient number of maternity cases by which to train both medical students and pupil midwives. The only cases now available for the purposes of instruction were those in connexion with lying-in hospitals. The workhouses were closed against students. The same lying-in woman was sometimes visited by fourteen or fifteen different students, all anxious to record an attendance. In this way the lives of poor women were made miserable. In Liverpool a very unpleasant state of things existed. There the medical students received their instruction in midwifery, not from a medical man, but from a midwife. In his opinion, the present training of medical students in midwifery was dangerously defective. Witness was about to support this opinion with evidence, when

Mr. Rathbone, M.P., intervened, and said that the Committee could not be expected to discuss the question of medical instruction. They must confine themselves to the midwives.

Dr. Rentoul said he wished to show that they had no right to turn out the medical students in order to make room for midwives. Proceeding to another point, witness submitted that in this country it would be very difficult to have midwives properly supervised, and that the introduction of a low class of practitioners would increase criminal practices.

The Chairman: But registration will surely elevate the class of practitioners?—Dr. Rentoul: I do not think so. You suggest that 10,000 old women should be placed on the register.—The Chairman: That is only to begin with.

Dr. Rentoul, continuing, expressed the view that before passing a Bill for the registration of midwives the Legislature should pass a Bill to register stillbirths. He explained to the Committee certain malpractices of midwives. Passing from this part of his case, witness laid it down that the poor and the working classes were well provided for in existing circumstances. He referred to the work of the Poor-law authorities, charitable institutions, friendly societies, and medical men. There were 29,000 medical men in this country ready for the work. In Liverpool, he regretted to say, there were many medical men prepared to deal with midwifery cases for 7s. 6d. or 10s. 6d., and to take their fees in instalments. In many parts of Lancashire the medical men kept a staff of collectors, who went round the districts each week gathering up the fees. Another point he wished to put to the Committee was whether, if a class of officially registered midwives were created, medical men would be able to employ such women as their legally qualified assistants in midwifery. He had put this point before the General Medical Council, and they had declined to give him an answer.

The Chairman said it was not a question for the Committee.

Dr. Rentoul assured the Committee that it deeply affected the operation of the Medical Act of 1886.

Mr. Rathbone said it would be for the General Medical Council to see to the observance of that Act.

Dr. Rentoul, examined by Dr. Farquharson, M.P., expressed the view that poor people derived more assistance from their neighbours than from midwives. He found patients ready to pay him 30s. and two guineas in order to escape from midwives. If people desired women practitioners they were well supplied at present by women doctors.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at Midnight on May 17th, 1893.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total	
Eastern Hospital	266*	62	..	15	..	344	440
North-Western Hospital	242	37	..	9	2	290	413
Western ,,	107†	31	..	4	5	147	236
South-Western ,,	219	35	..	9	1	264	350
South-Eastern ,,	293	10	1	12	3	319	424
Northern ,,	436	35	..	..	..	417	480
Totals	1563	211	1	49	11	1835	2333

* Two infants with mothers. † One infant with mother.

SMALL-POX.—*Atlas* hospital ship, 7

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANDREW, HENRY, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Devon and Exeter Hospital, vice R. Martyn.

ARCHER, A. M., M.D., L.M. Dub., has been appointed Medical Officer of the Workhouse, Chester Union.

ATKINS, J. F., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Workhouse Infirmary, Birmingham.

BARNETT, LAWRENCE, M.D. Lond., M.R.C.S., has been appointed Honorary Physician to the Kilburn, Maida-vale, and St. John's Wood General Dispensary.

BEAN, CHAS. E., L.R.C.P. Lond., M.R.C.S., has been appointed Analyst for the Plymouth County Borough, vice Oxland, resigned.

BERRY, A. E., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Assistant Medical Officer of the Crumpsall Workhouse, Township of Manchester.

BLAKE, S. R., M.R.C.S., L.R.C.P. Lond., has been appointed Senior House Surgeon to the West Ham Hospital.

BURTON, W. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Frodsham Sanitary District of the Runcorn Union.

CONWAY, AUBERT, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Kingswinford (No. 2) Sanitary District of the Stourbridge Union.

FISHER, T. E., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the West Norfolk and Lynn Hospital, Lynn.

FLETCHER, F. J., L.S.A., has been appointed Medical Officer for the Fourth Sanitary District of the Bourn Union.

GODSON, J. E., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Workhouse Infirmary, Birmingham.

HELPS, G. C., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Wells Sanitary District of the Frome Union.

HILLIER, R. J., M.R.C.S., L.R.C.P. Lond., has been appointed Junior House Surgeon to the West Ham Hospital.

LEES, C. F., M.B., C.M. Edin., has been appointed Medical Officer for the Infirmary of the Salford Union.

MARNOCH, JOHN, M.B., C.M. Aberd., has been appointed House Physician and Surgeon to the Sick Children's Hospital, Aberdeen.

PATTERSON, WM., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Seventh Sanitary District of the Oldham Union.

SMITH, HENRY, M.B., C.M. Dur., has been appointed Medical Officer for the Workhouse of the Durham Union.

SMITH, H. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Lye and Wollescote Sanitary District of the Stourbridge Union.

THOMPSON, E. T., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Dunstable Sanitary District of the Luton Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House Surgeon. Salary £65 per annum, with board, lodging, and washing in the hospital.

BOROUGH OF CHELTENHAM.—Medical Officer of Health for three years. Salary £500 per annum. (Apply to the Town Clerk, Cheltenham.)

BRADFORD INFIRMARY.—Dispensary Surgeon. Salary £100 per annum, with board and residence.

BURTON MEDICAL ASSOCIATION.—Junior qualified Assistant. Salary £150 (out-door). (Apply to Mr. Blant, Ebenezer, Shobnall-road, Burton-on-Trent.)

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistants.

CLAYTON HOSPITAL AND WAKEFIELD DISPENSARY, Wakefield.—Junior House Surgeon. Honorarium £25 per annum, with board, lodging, and washing.

DENTAL HOSPITAL OF LONDON, Leicester-square.—Dental Surgeon.

DEVON AND EXETER HOSPITAL, Exeter.—Assistant House Surgeon. Salary £40 per annum, with board and lodging, not including alcoholic liquors and aerated waters.

GENERAL HOSPITAL, Birmingham.—Assistant Physician for three years. Honorarium £100 per annum.

GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN, Vincent-square, S.W.—Chloroformist.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—Resident House Physician for one year. Salary £60 per annum, with board and residence in the hospital.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—Assistant House Surgeon (non-resident) for one year. Salary £50.

HOSPITAL FOR WOMEN (LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

LEEDS UNION.—Assistant Medical Officer and Dispenser for the Workhouse, Schools, and Infirmary in Beckett-street, Leeds. Salary £100 per annum, with board, washing, apartments, and attendance. (Apply to the Clerk, Union Offices, East Parade, Leeds.)

LIVERPOOL ROYAL INFIRMARY.—Assistant Honorary Physician and Two Assistant Honorary Surgeons.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL.—Assistant Ophthalmic Surgeon. (Apply to the Secretary, Hartshill, Stoke-on-Trent.)

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Resident Medical Officer for four months. Salary at the rate of £60 per annum, with board and residence.

ST. BARTHOLOMEW'S HOSPITAL.—Surgeon.

SALOP INFIRMARY, Shrewsbury.—House Surgeon. Salary £100 per annum, with board and residence.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea, S.W.—Dental Surgeon.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant for six months. Board, lodging, and washing provided.

WORCESTER GENERAL INFIRMARY.—Assistant to the House Surgeon and as Dispenser (unmarried), for one year. Salary £70 per annum, with board, residence, and washing.

Births, Marriages, and Deaths.

BIRTHS.

ELIOT.—On May 10th, at East Park-terrace, Southampton, the wife of Dr. E. F. Eliot, of a daughter.

FOX.—On May 15th, at Strathpeffer Spa, N.B., Katharine, the wife of Dr. Fortescue Fox, of a son.

GROSVENOR.—On May 9th, the wife of A. Augustus Grosvenor, B.A., M.R.C.S., of a daughter.

HANDFIELD-JONES.—On May 12th, at East-hill, Wandsworth, S.W., the wife of C. R. Handfield-Jones, M.R.C.S., L.R.C.P., of a son.

KIRKHAM.—On May 7th, the wife of F. W. Kirkham, M.D., L.R.C.P., of a son.

MOORE.—On May 11th, at Rederoft, Maidenhead, the wife of G. E. Moore, M.B., of a son.

MARRIAGES.

OAKLEY—CRIPPS.—On April 26th, at the Parish Church, Cirencester, by the Ven. Archdeacon Hayward, assisted by the Rev. Alan Cornwall, Vicar of Coleford, Adam R. H. Oakley, L.R.C.P. Edin., of Horuchurch, Essex, second surviving son of Sir Henry Oakley, of Chester-terrace, Regent's-park, N.W., to Ellen Judith, second daughter of the late Edward Cripps, M.R.C.S., of Cirencester.

ROBERTS—SCOTT.—On May 17th, at All Saints', Eastbourne, Charles Gordon Roberts, M.A., M.B. Cantab., youngest son of Bransby Roberts, of Eastbourne, M.D., to Janet Bogle (Nettie), eldest daughter of the late James G. T. Scott, C.E., of Truro House, Burlington-place, Eastbourne.

SKRIMSHIRE—GROOMES.—On May 10th, at the Parish Church, Shalford, Essex, the Rev. Arthur J. Skrimshire, M.D., Rector of Hadleigh, Essex, eldest surviving son of the late Fenwick Skrimshire, M.D., of Paston Hall, Peterborough, to Agnes Maria, only daughter of the late Rev. John Groomes, M.A., Vicar of Shalford.

DEATHS.

EADY.—On May 13th, at Chertsey, Surrey, Geo. John Eady, Surgeon, in his 76th year.

HENDRY.—On May 13th, at Cullen, Banffshire, Alexander Hendry, M.B., C.M. Edin.

NICHOLSON.—On May 16th, suddenly, at Woodlands, Harefield, Middlesex, John Frederick Nicholson, F.R.C.S., aged 75.

NUNN.—On May 10th, at his residence, The Mount, Higher Broughton, Manchester, Dr. Nunn, late of Lyndhurst, Hants, aged 47.

PATERSON.—On May 15th, at Grosvenor-terrace, Glasgow, Joshua Paterson, M.D., aged 78.

QUICKE.—On May 12th, at Albert House, Bradford-street, Manchester, Frances Cole ("Fanny"), wife of W. J. Quicke, M.R.C.S. &c.

RANDALL.—On May 14th, suddenly, at 204, Adelaide-road, South Hampstead, John Randall, M.D. Lond., F.R.C.S., &c., aged 74.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, May 23.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday, Wednesday, Friday, and Saturday at the same hour.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital: 1 P.M., Mr. Wm. Lang: Conjunctival Affections.—Great Northern Central Hospital: 8 P.M., Dr. Galloway: Gastro-intestinal Tract.—Parkes Museum (Margaret-st., W.): 4 P.M., Dr. A. Wynter Blyth: Construction and Ventilation of Dwelling Houses.

ROYAL COLLEGE OF SURGEONS.—4 P.M. Dr. J. Rose Bradford: The Physiology of the Vaso-motor System.

NATIONAL ORTHOPÆDIC HOSPITAL (Great Portland-street, W.).—5 P.M. Mr. E. Muirhead Little: Deformities of the Head and Trunk, including Diseases of the Spine and Wry Neck.

Tuesday, May 24.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Professor R. C. Jebb: Some Aspects of Greek Poetry.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars: 4 P.M., Mr. Jonathan Hutchinson: Eczematous Dermatitis.—Bethlem Hospital: 2 P.M., Dr. H. Corner: Stupor and Dementia.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—Dr. A. E. Garrod: The Changes in the Blood in the course of Rheumatic Attacks.—Mr. Hugh Lane: Further Observations in reference to the Distinctions to be drawn between Rheumatoid Arthritis and Rheumatic Arthritis.

Wednesday, May 25.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.

CHARING-CROSS HOSTITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Mr. R. J. Godlee: Surgical Treatment of Empyema.—Royal London Ophthalmic Hospital: 8 P.M., Mr. J. B. Lawford: Toxic Amblyopia.

ROYAL COLLEGE OF SURGEONS.—4 P.M. Dr. J. Rose Bradford: The Physiology of the Vaso-motor System.

Thursday, May 26.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

ROYAL INSTITUTION.—3 P.M. Mr. R. G. Moulton: Faust.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. Hadden: Selected Cases from the Out-patient Department.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Ormerod: Hemiplegia.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Mr. W. R. H. Stewart: Causation in Ear Disease.

BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square).—8.30 P.M. Dr. Fancourt Barnes: Ovariotomy during Pregnancy. Specimens:—Dr. Wm. Travers: Dermoid Cyst.—Dr. J. Inglis Parsons: Stone from the Urethra.

Friday, May 27.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Mr. R. J. Godlee: Surgical Treatment of Pulmonary Cavities.—Bacteriological Laboratory, King's College: 11 A.M. to 1 P.M., Professor Crookshank: Tuberculosis (Examination of Sputum). Charing-cross Medical School: 8 P.M., Dr. Potter: Pessaries, their Object and Use.

ROYAL COLLEGE OF SURGEONS.—4 P.M. Dr. J. Rose Bradford: The Physiology of a Vaso-motor System.

CLINICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Nunn: A case of Cubitus Valgus and Cubitus Varus arising from Fracture at the Elbow-joint.—Mr. Frederick Treves: A case of Sarcoma of the Buttock treated by Ligature of the Internal Iliac Artery.—Mr. Clutton: A case of Gastrostomy for Stricture of the Œsophagus at the age of four; eventual restoration of the normal passage.—Dr. Douglas Drew (introduced by Dr. Ringer): A case of Leucocythæmia treated with Arsenic. 9.30 P.M. Annual Meeting.

ROYAL INSTITUTION.—9 P.M. Sir J. Crichton-Browne: Emotional Expression.

Saturday, May 28.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. H. Corner: Climacteric and Senile Insanity.

ROYAL INSTITUTION.—3 P.M. Professor H. Marshall Ward: Some Modern Discoveries in Agriculture and Forest Botany.

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

"A NEW USE OF THE TITLE M.B."

THE following is another instance of the audacious use of the title M.B. to which we referred in our last issue. The correspondent who sends it to us wonders that those representing the profession do not take steps to prevent this. Our reply is that the M.B. is not attached to any particular institution which can feel itself aggrieved. Meanwhile the public falls between two stools:—

> "D. Wilkinson, M.B., Chapel-street, Ripley, Derby, removes Tumours, Cancers, and Abscesses, without cutting; also removes the Germs of Consumption, even when they are given up."

An Anxious Inquirer.—The authority would have to be more than presumably trustworthy to induce us to believe that the converse o Goldsmith's lines would hold good—

> "The man got better of the bite,
> The dog it was that died."

All patients bitten by mad dogs do not, of course, suffer from hydrophobia; but, so far as we know, there are, at present, no well-authenticated instances recorded of true hydrophobia resulting from the bite of a dog that was not affected with rabies. Of course, there are cases of death after the bite of a dog, from shock and fright, the effects of nervous excitement; but these cannot be reckoned as cases of hydrophobia in the recognised sense of the term.

Country Surgeon will perhaps be able to obtain the information he desires from the Secretary of the Brussels Graduates' Association, Florence House, Ealing.

POST NON PROPTER!

To the Editors of THE LANCET.

SIRS,—As a specimen of anti-vaccinationist "argument" the following may, I think, be found amusing. A young woman brought her baby to be vaccinated this evening. "It's a shame," said she, "that we should have to do it." "But surely," I replied, "you would rather have the child vaccinated than let him get small pox." "Oh, doctor," was the answer, "small-pox is out of date now."

I am, Sirs, yours truly,

May, 1892. GELASMA.

SHAFTS AT THE PROFESSION.

MANY are the witty tales which have been told of, and by, medical men. Sir John Hill, for instance, a medical man of great renown in the last century, formed, by reason of his eccentric habits, a fertile source of inspiration for many of the wits of the period. He rarely failed, however, to turn the tables on his assailants. He was a voluminous writer, his chief work being a "System of Botany" in twenty volumes. Mr. J. Lovett de Wolfe reminds us of the "Juntos" (supposed to be friends of Garrick), who wrote witty passages to the public prints against the old doctor. Alluding to his botanical researches, and to certain lines which he had written, they wrote:—

"Thou essence of dock, valerian, and sage,
At once the disgrace and pest of the age;
The worst that we wish thee for all thy sad crimes
Is to take thy own physic and read thy own rhymes."
The Junto.

The next appeared in answer to "The Junto," as follows:—

"Their wish in form must be reverst,
To suit the doctor's crimes;
For he who takes his physic first
Will never read his rhymes."—*Another Junto.*

But the shrewd doctor was equal to the occasion. He replied by sending to one of the papers the following lines:—

"Ye desperate Junto, ye great, or ye small,
Who combat dukes, doctors, the devil and all,
Whether gentlemen scribblers, or poets in jail,
Your impertinent curses will never prevail;
I'll take neither sage, dock, valerian, nor honey,
Do *you* take the physic, and *I'll* take the money."

Kentigern.—We have not seen any announcement of a second volume of Hillairet et Gaucher's "Traité des Maladies de la Peau." Part IV. of Leloir and Vidal will doubtless be published in the course of this year, as hitherto one part a year has been published.

Dr. J. Cartwright Reed (Herschel, Cape Colony) is thanked for his communications, which would scarcely be of sufficient interest for publication at the present time, as they refer to occurrences that took place so long ago.

FLOATING SPLEEN.

To the Editors of THE LANCET.

SIRS,—During an unusually long professional life I have had the pportunit y of seeing many instances of that anatomical peculiarity, the "floating kidney." Discussing the matter lately with a medical friend, I came to the impression that a case he related to me as being, he supposed, one of this anomaly, was perhaps a case of "floating spleen." In all the cases of floating kidney which I have met with I have always detected the form and size of the adult kidney, and besides, not seldom, have found that the mass has disappeared on the patient assuming the recumbent position, until I had made an upward pressure at the loin; but in the case related by my friend the tumour was always to be felt, though not always in the same spot, and, moreover, always in the left pelvic region. He stated that its form was not that of the kidney—that is, was of a somewhat larger size, and more like the shape of the spleen. That the matter is of some moment I need scarcely say, and therefore I am induced to ask your many correspondents whether their attention has been drawn to the subject. I have myself only succeeded in finding one reference to it—i.e., by a Dr. Gustav Klein, who found, at a necropsy, a "floating spleen" in the pelvis. (*Vide* p. E. 16, the "Annual of the Medical Sciences," vol. ii., 1890.)—Yours truly,

Birkenhead, May 16th, 1892. CHAS. H. HIGGINS, M.D.

A PRACTICAL SUGGESTION FOR THE IMPROVEMENT OF THE PRESENT HOSPITAL SYSTEM.

WE have received from a correspondent a communication which is interesting, but not practical. It is entirely unpractical, and contrary to the laws under which the Medical Council acts, according to the spirit of which all persons on the Register are equally "qualified," and in the letter of which there is nothing to sanction the Council undertaking such extraordinary functions. The hospitals of England at least must either be conducted as voluntary institutions, or undergo an entire revolution in their constitution and in the basis of their support.

E P.—We would suggest to our correspondent to make an official application to the Colonial Office, setting forth his requirements and professional qualifications, and asking for information as to any vacancies.

A CORRECTION.

To the Editors of THE LANCET.

SIRS,—Please allow me to contradict the statement which appeared in THE LANCET that Brigade-Surgeon Maunsell died of yellow fever at Up Park Camp, Jamaica. As one of the medical men who attended the late Brigade-Surgeon Maunsell from Nov. 17th to the day of his death, which occurred on Dec. 5th, 1891, I am in a position to state that his disease was not yellow fever. I am, Sirs, yours obediently,

JASPER CARGILL, M.D.

Monaltrie, St. Andrew, Jamaica, May 2nd, 1892.

OBSTETRIC AMENITIES.

Mr. B. M. Bond.—There is nothing which tries the good temper of medical men more than the call to attend an obstetric case from a brother practitioner, perhaps in the night or at great personal inconvenience. Such demands should not often arise, but they will occasionally occur. And every right-hearted practitioner will do as our correspondent did. The gentleman for whom he acted should at the very first opportunity show his appreciation of the act of kindness. Our correspondent assumes that his neighbour neglected to do this because he did not do so on first visiting the patient. This seems to us somewhat hasty judgment. At any rate, we should require to know all the facts and all the engagements of Mr. —— before we could decide. Be this as it may, it would have been better for Mr. Bond to have given a little more time to Mr. —— before writing him a "polite note" and claiming a fee. A little time solves many questions of this sort. With this qualification, we entirely approve Mr. Bond's conduct in the matter, and regret that on the other side the correspondence was not quite couched in terms which did justice to him and to his prompt action in the case. There should be no difficulty in putting this matter right between neighbours.

Dubitans.—The question is one which could be best answered by the medical attendant, who knows the time of onset of the inflammation with reference to the use of the injection or of the unusual exertion. The complication is very common where no injection is used.

"A MUSEUM OF CURIOSITIES."

To the Editors of THE LANCET.

SIRS,—In answer to your correspondent of the 14th inst., it is hardly necessary to point out that the case recorded should not be classed as one of true hermaphroditism. The mere fact that the testicles were present, coupled with hypospadias and the absence of vaginal orifice, is sufficient evidence that the case was only one of arrested development in the male embryo. On the other hand, the presence of a depressed fissure of the sacral spines, which is of great interest, seems hardly to have engaged the attention of your correspondent. There is good reason for assuming that this condition represents an obliterated state of the neurenteric canal of the embryo; and, indeed, a few similar cases have already been recorded. It also would have added interest to the case if auscultation over the præcordium had been attempted, with a view to determining the presence or absence of cardiac deformity.

I am, Sirs, yours faithfully,

May 17th, 1892. EMBRYOLOGIST.

"THE TITLE OF DOCTOR."

To the Editors of THE LANCET.

SIRS,—Will you allow me to correct the statement of your correspondent "M.B. Lond." in his letter dated May 9th, 1892, in which he says that the Scotch, Irish, and English universities (except London University) grant a M.D. degree to their M.B. graduates on payment of a fee and the production of a thesis? In the Royal University of Ireland the M.D. degree is only granted to its M.B. graduates after passing an examination which extends over three days, and consists of two written papers, two clinical, oral, and practical pathological examinations; and this examination was until recently accepted for promotion in the army in place of the Fellowship of a College. The graduates of the Royal University, Ireland, consider themselves—and justly—on equal standing with the graduates of London University.

I am, Sirs, yours faithfully,

May 15th, 1892. M.B., R.U.I.

"STRICTURE OF THE URETHRA."

To the Editors of THE LANCET.

SIRS,—There is a mistake in my paper on Stricture in THE LANCET of April 9th, 1892, which destroys its sense. I did not say that "under no circumstances whatever is *external* urethrotomy a justifiable operation," but that under no circumstances whatever is *internal* urethrotomy a justifiable operation. If a surgeon can pass instruments, he can dilate all organic strictures. If he cannot, then he can perform external urethrotomy; and external urethrotomy is also very often the only operation advisable in traumatic strictures.

I am, Sirs, your obedient servant,

EDWARD LAWRIE,
Surgeon-Lieutenant-Colonel.

The Residency, Hyderabad, April 28th, 1892.

THE REPORT ON COLOUR VISION.

To the Editors of THE LANCET.

SIRS,—Will you kindly state in THE LANCET that a mistake has occurred in the Report of the Colour Vision Committee of the Royal Society? It is there stated that two colour-blind persons were passed by me. Both these men were rejected by me, and no colour-blind person escaped detection by either of my tests. Capt. Abney says that the unfortunate error was due to my using a nomenclature different from that generally adopted, and that he will correct it.

I am, Sirs, faithfully yours,

F. W. EDRIDGE-GREEN, M.D.

Willesden-green, N.W., May 18th, 1892.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 19th, 1892.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 13	30·26	S.E.	57	51	116	74	49	..	Hazy
,, 14	30·02	S.W.	58	54	87	63	54	·04	Overcast
,, 15	30·02	W.	58	53	91	61	46	·08	Cloudy
,, 16	29·85	S.W.	55	53	109	63	47	..	Cloudy
,, 17	29·86	W.	55	51	110	60	51	..	Cloudy
,, 18	30·11	S.W.	56	51	107	65	49	·01	Cloudy
,, 19	30·01	N.W.	58	52	96	62	48	..	Cloudy

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from — Dr. J. Appleyard, Bradford, Yorks; Mr. Atkinson, Newcastle; Messrs. Arnold and Son; Professor H. T. Butlin, London; Miss Bascombe, Margate; M. Berthier, Paris; Mr. Brydges, Cheltenham; Mr. Ed. Cornish, Walthamstow; Dr. F. Ed. Cave, Plumstead; Mr. Chapman, Paris; Dr. A. Duke, Dublin; Mr. Davison, Newburn-on-Tyne; Dr. Walker Downie, Glasgow; Mr. A. J. Dodd, West Brighton; Dr. Davies, Ebbw Vale; Mr. Dale, Bishop's Teignton; Messrs. Easun and Son, Dublin; Dr. W. E. Finny, Kingston Hill, Surrey; Mr. N. H. Forbes, Tunbridge Wells; Mr. J. Fawcett, Eccles; Mr. Frost, London; Mr. Grant, Edinburgh; Mr. Green, London; Dr. Glaser, Vienna; Dr. John Gordon, Aberdeen; Mr. G. A. Hawkins-Ambler, Liverpool; Mr. J. Lawrence Hamilton, Brighton; Dr. Hime, Bradford; Dr. P. T. Harvey, Fort Keogh, Mont.; Mr. Hordley, Stoke-upon-Trent; Messrs. Harris and Sons, London; Mr. A. Harkin, Belfast; Mr. Hornibrook, London; Dr. C. Higgins, Birkenhead; Messrs. Keen, Robinson, and Co., London; Mr. Kynaston, Liverpool; Dr. Lord, Bournemouth; Mr. E. Leon, Leeds; Surgeon-Major Lawrie, Hyderabad; Mr. H. W. Lewis, London; Sir W. Mackinnon, Director-General; Messrs. Mertens and Co., London; Mr. Mudholkar, Berar, India; Messrs. McCorquodale and Co., Glasgow; Dr. P. McBride, Edinburgh; Dr. R. Martin, Manchester; Dr. Meade, Newmarket; Mr. Martin, Paris; Dr. E. J. Moure, Bordeaux; Mr. Marshall, Manchester; Dr. H. C. Martin, London; Mr. Martindale, London; Mr. Monkhouse, Brixton; Messrs. Oppenheimer Bros. and Co., London; Messrs. Orridge and Co., London; Mr. Pentland, Edinburgh; Mr. W. P. Potter, Kensington; Mr. Poore, London; Mr. Bilton Pollard, London; Mr. J. Young Pentland, London; Dr. Rendall, London; Dr. E. Rouse Rouse, New Southgate; Dr. R. R. Rentoul, Liverpool; Messrs. J. Richardson and Co., Leicester; Messrs. Reynolds and Branson, Leeds; Mr. T. Smith, London; Mr. Scott, Bromsgrove; Messrs. G. Street and Co., London; Mr. Simpson, Preston; Dr. H. W. A. Sandell, Leighton Buzzard; Dr. A. Stella, Naples; Mr. Stellard, Worcester; Dr. W. Irvine Sellars, Preston; Mr. Taylor, Bury; Mr. Tett, Kilburn; Dr. John Thompson, Edinburgh; Mr. J. J. Thorney, Hull; Messrs. Thorp and Co., Glossop; Dr. J. K. Tomory, Dumfries; Messrs. Whitworth and Stuart, Manchester; Dr. H. Weber, London; L.R.C.P.; *Northampton Herald*; M.D., London; M.R.C.S., London; W. J. C., London; Clerk to the Guardians, Manchester; R. K., London; U. V.; Clerk, Leeds Union; G. B., London; C. S. H., Bristol; Maltine Manufacturing Co., Bloomsbury; P. H., London; R.S.O., London; Burrow's Drug Stores, London; Veritas, London; F. Y., London; Secretary, Devon and Exeter Hospital; Secretary, Royal Infirmary, Liverpool; Sanitary Wood Wool Co., London; Reuter's Telegram Co., London.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Rideal, Abergele; Mr. Kerr, Oldham; Dr. Craigie, Chard; Messrs. Lawson and Son, Forfar; Mr. Middleton, Peterhead; Messrs. Negretti and Zambra, London; Dr. Bowman, Durham; Messrs. Elliott, Son, and Boyton, London; Mr. Bosworth. Paddington; Messrs. Curtis and Co., London; Miss Hicks, Falmouth; Messrs. West, Newman, and Co., London; Mr. Tyte, Minchinhampton; Messrs. Johnstone, Edinburgh; Mr. Worall, Southport; Miss Jillee, Putney; Mrs. Theobald, Leicester; Dr. Brooks, Manchester; Mr. Rivers, Maidstone; Mr. R. Davis, London; Mr. Coward, Manchester; Mr. Ballachey, Chilford; Mr. Taafe, Londonderry; Mr. Beckton, London; Dr. Griffith, Carnforth; Mr. Bryce, Sidmouth; Dr. Waters, Liverpool; Mr. McCormack, Yorks; Mr. Hall, Keswick; Mr. Norman, Devon; Mr. Daw, Warrington; Dr. Kneass, Italy; Mr. Beaumont, Edinburgh; Mr. McDougall, Runcorn; Mr. Bastard, Blandford; Dr. Bower, Bedford; Mr. Smith, Berwick; Mr. Todd, Carlisle; Mr. Ross, Bristol; Mr. Niven, West Auckland; Messrs. Gale, Bouverie-street; Dr. Needham, Barnwood House, Gloucester; Mr. Kegworth, Hastings; Messrs. Wright and Mackenzie, Romford; Mr. McConville, Glasgow; Mr. James, Port Talbot; Mrs. Bagster, London; Dr. Pinder, London; Mr. Wallis, New Southgate; Mr. Quicke; Mr. Chapman, Leyburn; Messrs. Lee and Nightingale, Liverpool; Mr. Lowe, Edinburgh; Messrs. Tayler and Co., London; Mr. Ross, Ashton-under-Lyne; Dr. Griffith, Milford Haven; Mr. Thin, Edinburgh; Mr. Evans, Llanberis; Mr. Garnatt, Windermere; Mr. Heywood, Manchester; Mr. Tresise, Burton-on-Trent; Mr. Oakley, Hornchurch; C. F. W., London; Vaccine Lymph Association, London; Mater, London; Pater, London; J. E. H., Clay Cross; P. D., Bayswater; Garton, London; Secretary, Hospital for Women, Soho-square; Physician, Essex-street; M. L., London; Aston Union; Doctor, London; Cyrus, London; Secretary, Norfolk County Asylum; A. P., Hatcham; Assistant, co. Durham; Secretary, York County Hospital; C. F. W., London; D. K. S., London; Exeter City Asylum; Manchester, London; Querens, London; Secretary, Rock Life Assurance Co.; Secretary, Royal Hospital for Diseases of the Chest, City-road; Phenol, London; Mother, London; Manager, *Daily Post* Office, Birmingham; Aconite, London; Hon. Secretary, Worksop Dispensary; S. B. Y., London; Forceps, London; Secretary, Staffs General Infirmary; S., Southampton; C. E. D., London; Haydock Lodge, Newton-le-Willows; Andrew, London; Central Medical Association, Manchester; Drugs, London; C. C., Birkenhead; Medicus, London; G., Bournemouth; Nemo, Birmingham; D. H., Bath; Ad. Boojum, London; Fidelis, London; S. C. S., Ealing; Alpha, Manchester; Medicus, Yorks; Mentor, London; Snowdon, London; Surgeon, London.

NEWSPAPERS.—*Manchester Guardian, Freeman's Journal, Guardian, Times of India, South Australian Register, Sydney Daily Telegraph, Western Daily Mercury, Bristol Times, Dundee Advertiser, South Wales Daily News, Scottish Leader, Kentish Mail, Irish Times, Newcastle Daily News, Scotsman, Glasgow Herald, Reading Mercury, Citizen, West Middlesex Standard, Windsor and Eton Gazette, Hertfordshire Mercury, City Press, Radical Review, Weekly Free Press and Aberdeen Herald, Surrey Advertiser, Leeds Mercury, Windsor and Eton Express, Law Journal, Builder, Electrical Review, West Middlesex Advertiser, Pioneer Mail, Local Government Chronicle, Mining Journal, Architect, Insurance Record, Guy's Hospital Gazette, Sanitary Record, Liverpool Daily Post, Haverfordwest Telegraph, Woodford Times, North China Herald, Le Temps (Paris), The Buteman (Rothesay), Reigate and Redhill Journal, Local Government Journal, Evening Express (Liverpool), Yorkshire Post, Kensington News, Sunday Times, &c.*, have been received.

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Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.